9-2330-235-14

TM 9-2330-235-14

TECHNICAL MANUAL

OPERATOR'S ORGANIZATIONAL, DIRECT SUPPORT, AND
GENERAL SUPPORT MAINTENANCE MANUAL
(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

TRAILER, CHASSIS: 1-TON, 2-WHEEL M514 (2330-542-5753) XM545 (2330-783-7574) AND TRAILER, CHASSIS: 2-TON, 2-WHEEL M390 (2330-446-7515), AND M390C (2330-542-3491)

This copy is a reprint which includes current pages from Change 2.

HEADQUARTERS, DEPARTMENT OF THE ARMY

TAGO 15A

NOVEMBER 1972

OPERATOR'S PRECAUTIONS

WARNING

When stenciling, avoid excessive inhalation of vapors. All cleaning and stenciling procedures must be performed in a well-ventilated room or outdoors. A CO_2 fire extinguisher must be positioned adjacent to the area where cleaning and stenciling procedures are performed. The use of diesel fuel oil, gasoline, or benzene for cleaning is prohibited.

OPERATOR'S DO'S

Ordinary deficiencies disclosed during preliminary inspection and servicing or during break-in period will be corrected by the using organization or a higher maintenance category.

Serious deficiencies, which appear to involve unsatisfactory design or material, will be reported in accordance with instructions in TM 38–750.

OPERATOR'S DON'TS

If tires are hot, do not reduce air pressure, but reduce road speed of towing vehicle.

CAUTIONS

It is imperative that the approved practices and precautions be followed. A detailed study of TM's 21–300 and 21–305 is essential for use of this material under unusual conditions.

For operation of this vehicle under extreme cold conditions (0° and below), it is imperative that the approved practices and precautions be followed. TM 9–207 contains information which is specifically applicable to this vehicle as to all other vehicles. It must be considered an essential part of this manual, not merely an explanatory supplement to it.

Use non-petroleum hydraulic brake fluid only. Petroleum base oil renders brakes inoperative.

On the M390 and M390C trailers, put rear leveling jacks in support position before disconnecting lunette from prime mover.

TM 9-2330-235-14
*C 2

CHANGE No. 2

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, *30 December 1980*

Operator's, Organizational, Direct Support, and General Support Maintenance Manual (Including Repair Parts and Special Tools List) TRAILER, CHASSIS: 1-TON, 2-WHEEL M514 (2330-00-542-5753) XM545 (2330-00-783-7574) AND TRAILER, CHASSIS: 2-TON, 2-WHEEL M390 (2330-00-446-7515), AND M390C (2330-00-542-3491)

Current as of 15 July 1980

TM 9-2330-235-14, 3 November 1972, is changed as follows:

Page 1-1. Paragraph 1-3 is superseded by the following:

1-3. Reporting Errors and Recommending Improvements

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) direct to: Commander, US Army Tank-Automotive Materiel Readiness Command, ATTN: DRSTA-MBP, Warren, Michigan 48090. A reply will be furnished to you.

Page 1-1, paragraph 1-11*a* add the following:

Manufacturer	*M390*	*M390 C*
	Eidal Mfg. Co.	Eidal Mfg. Co.

Page 1-4. Add the following paragraphs:

1-12. Components of End Item

These items are installed in the vehicle at time of manufacture or rebuild. They are securely fastened, permanently attached, or placed behind a cover. (None authorized).

1-13. Expendable Comsumable Maintenance Supplies and Materials

Supplies and materials required for maintenance support of the equipment covered herein are authorized to be requisitioned by SB 700-50. Refer to table 1-1.

Table 1-1 is added as follows:

Table 1-1. Expendable Consumable Maintenance Supplies and Materials

National stock number	Description	Unit of meas	Qty auth
	Brake Fluid, Automotive (HB) VV-B-680		
9150-00-231-9071	1 gal can	ea	V
	Grease, Automotive and Artillery (GAA) MIL-G-10924		
9150-00-190-0904	1 lb can	ea	V
9150-00-190-0907	35 lb can	ea	V
	Hydraulic Fluid, Non-petroleum Base, Automotive Brake (Arctic) (HBA) MIL-B-46176		
9150-01-059-2586	1 gal can	ea	V
	Lubricating oil, Internal Combustion Engine, Tactical Service OE/HDO-30 MIL-L-2104		
9150-00-186-6681	1 qt can	ea	V
9150-00-265-9435	5 gal can	ea	V
9150-00-189-6729	55 gal drum	ea	V
	Lubricating Oil, Internal Combustion Engine, (Arctic) (OEA) MIL-L-46167		
9150-00-402-4478	1 qt can	ea	V
9150-00-402-2372	5 gal can	ea	V
9150-00-407-0972	55 gal drum (16 ga)	ea	V
9150-00-491-7197	55 gal drum (18 ga)	ea	V
	Solvent, Drycleaning (SD-2) P-D-680		
6850-00-274-5421	5 gal can	ea	V
6850-00-664-5685	24 qt pail	ea	V
6850-00-285-8011	55 gal drum	ea	V

Page 2-6. Section IV is superseded as follows:

* This change supersedes C 1, 31 August 1973.

Section IV. OPERATOR/CREW PREVENTIVE MAINTENANCE CHECKS AND SERVICES

2-15. General

Preventive maintenance is detecting/correcting problems before they happen, or fixing little problems before they become big problems. Table 2-1 contains a list of preventive maintenance checks and services to be performed by operator/crew. Attention to these checks and services will increase the useful life of the equipment, but every possible problem cannot be covered in the PMCS. Be alert for anything that might cause a problem.

2-15.1. Maintenance Forms and Records

Every mission begins and ends with the paperwork. There isn't much of it, but you have to keep it up. The forms and records you fill out have several uses. They are a permanent record of the services, repairs, and modifications made on your equipment. They are reports to organizational maintenance and to your commander. And they are a check-list for you when you want to know what is wrong with the equipment after its last use, and whether those faults have been fixed. For the information you need on forms and records, see TM 38-750.

2-16. Preventive Maintenance Checks and Services

a. Do your (B) PREVENTIVE MAINTENANCE just before you operate the equipment. Pay attention to the CAUTIONS and WARNINGS.

b. Do your (D) PREVENTIVE MAINTENANCE during operation. (During operation means to monitor the trailer while it is actually being operated.)

c. Do your (A) PREVENTIVE MAINTENANCE right after operating the equipment. Pay attention to the CAUTIONS and WARNINGS.

d. Do your (W) PREVENTIVE MAINTENANCE weekly.

e. Do your (M) PREVENTIVE MAINTENANCE once a month.

f. If something doesn't work, troubleshoot it with the instructions in this manual or notify your supervisor.

g. Always do your PREVENTIVE MAINTENANCE in the same order, so it gets to be a habit. Once you've had some practice, you'll spot anything wrong in a hurry.

h. If anything looks wrong and you can't fix it, write it on your DA Form 2404. If you find something seriously wrong, report it to organizational maintenance RIGHT NOW.

i. When you do your PREVENTIVE MAINTENANCE, take along the tools you need to make all the checks. You always need a rag or two.

WARNING

Drycleaning solvent (SD-2) used to clean parts is potentially dangerous to personnel and property. Do not use near open flame or excessive heat. Flash point of solvent is 138°F.

(1) *Keep it clean.* Dirt, grease, oil, and debris only get in the way and may cover up a serious problem. Clean as you work and as needed. Use drycleaning solvent (SD-2) to clean metal surfaces. Use soap and water when you clean rubber or plastic material.

(2) *Bolts, nuts, and screws.* Check them all for obvious looseness, missing, bent, or broken condition. You can't try them all with a tool, of course. But look for chipped paint, bare metal, or rust around bolt heads. If you find one you think is loose, tighten it or report it to organizational maintenance.

(3) *Welds.* Look for loose or chipped paint, rust, or gaps where parts are welded together. If you find a bad weld, report it to organizational maintenance.

(4) *Electric wires and connectors.* Look for cracked or broken insulation, bare wires, and loose or broken connectors. Tighten loose connectors and make sure the wires are in good shape.

(5) *Hoses and fluid lines.* Look for wear, damage, and leaks, and make sure clamps and fittings are tight. Wet spots show leaks, of course. But a stain around a fitting or connector can mean a leak. If a leak comes from a loose fitting or connector, tighten it. If something is broken or worn out, report it to organizational maintenance.

j. It is necessary for you to know how fluid leakage affects the status of your equipment. The following are definitions of the types/classes of leakage you need to know to be able to determine the status of your equipment. Learn, then be familiar with them and REMEMBER - WHEN IN DOUBT, NOTIFY YOUR SUPERVISOR!

Leakage definitions for Operator/Crew PMCS are:

CLASS I — Seepage of fluid (as indicated by wetness or discoloration) not great enough to form drops.

CLASS II — Leakage of fluid great enough to form drops but not enough to cause drops to drip from item being checked/inspected.

CLASS III — Leakage of fluid great enough to form drops that fall from the item being checked/inspected.

CAUTION

Equipment operation is allowable with minor leakage (Class I or II). Of course, consideration must be given to the fluid capacity in the item/system being checked/inspected. When in doubt, notify your supervisor.

When operating with Class I or II leaks, continue to check fluid levels as required in your PMCS.

Class III leaks should be reported to your supervisor or to organizational maintenance.

Table 2-1. Operator/Crew Preventive Maintenance Checks and Services

B—Before D—During A—After W—Weekly M—Monthly

Item No.	Interval					ITEM TO BE INSPECTED Procedure: Check for and have repaired, filled, or adjusted as needed	Equipment is not ready/ available if:
	B	D	A	W	M		
						NOTE PERFORM WEEKLY AS WELL AS BEFORE PMCS IF: *a.* You are the assigned operator but have not operated vehicle since the last weekly. *b.* You are operating the vehicle for the first time.	
1						MAKE THE FOLLOWING WALK AROUND CHECKS: (Exterior of vehicle)	
	•					*a.* Check for evidence of leakage of hydraulic fluid on or under the trailer.	Class III leakage is evident.
	•					*b.* Check frame, towing lunette, and safety chains for obvious damage.	
	•					*c.* Check tires for damage and pressure (correct pressure is 50 psi highway: 35 psi cross-country: or 15 psi mud, snow, or sand).	Tires have cuts or abrasions which obviously could result in failure during operation.
				•		*d.* Visually check for loose, missing, or damaged parts.	One or more tires missing or unserviceable.
2				•		WHEELS Inspect wheel stud nuts and hub cover screws to see that they are present and for indications of looseness.	
3				•		INTERVEHICULAR CABLE Inspect cable to see that it is in good condition and that all connectors are correctly assembled and secured in the mounting clips.	
4				•		INTERVEHICULAR HOSE Inspect hose to see that it is in good condition and securely connected.	
5				•		SUSPENSION SYSTEM Inspect suspension system and associated mounting parts for missing items and obvious damage.	One or more items are missing or damaged which would obviously impair normal vehicle operation.
6		•				LIGHTS Check lights for proper operation.	
7				•		ELECTRIC WIRING Check wiring harness to see that it is securely connected and supported, and that the insulation is not cracked or chafed.	
8		•				GENERAL OPERATION Be alert for any unusual noises or improper operation of brakes, swivel caster with hub, or retractable support, and leveling jacks.	

Page 3-3, figure 3-2. Note 2 is superseded as follows:

2. OIL CAN POINTS

Quarterly lubricate handbrake linkage; leveling jack adjusting nut and swivel housing mating surfaces, staybars, foot pad pins, inner tubes, retractable support inner tube, spring loaded handle, wheel assembly, and hinges and brackets.

Page 3-4. Section III is superseded as follows:

Section III. ORGANIZATIONAL PREVENTIVE MAINTENANCE CHECKS AND SERVICES

3-8. General

Preventive maintenance is detecting/correcting problems before they happen, or fixing little problems before they become big problems. Table 3-1 contains a list of preventive maintenance checks and services to be performed by organizational maintenance personnel. Attention to these checks and services will increase the useful life of the equipment, but every possible problem cannot be covered in the PMCS. Be alert for anything that might cause a problem. If anything does look wrong, and you can't fix it, write it on a DA Form 2404 and report it to your supervisor. Be sure to record any corrective action.

3-9. Organizational Preventive Maintenance Checks and Services

a. Perform the checks and services at the intervals shown in table 3-1.

(1) Do the (Q) checks and services once each three months.

(2) Do the (S) checks and services twice a year, or each six months.

(3) Do the (A) checks and services once each year.

(4) Do the (B) checks and services once each two years.

(5) Do the (H) checks and services at the hour interval listed.

(6) Do the (MI) checks and services when the

mileage of the vehicle reaches the amount listed.

b. If the trailer doesn't work properly and you can't see what is wrong, refer to Section IV for troubleshooting instructions.

WARNING

Drycleaning solvent (SD-2), used to clean parts is potentially dangerous to personnel and property. Do not use near open flame or excessive heat. Flash point of solvent is 138°F.

c. Make cleanup a part of your preventive maintenance. Dirt, grease, oil and debris may cover up a serious problem. Wipe off excess grease and spilled oil. Use drycleaning solvent (SD-2) to clean metal surfaces. Use soap and water when you clean rubber or plastic material.

d. Watch for and correct anything that might cause a problem with the equipment. Some things you should watch for are:

(1) Bolts, nuts, and screws that are loose, missing, bent, or broken.

(2) Welds that are bad or broken.

(3) Electric wires and connectors that are bare, broken, or loose.

(4) Hoses and fluid lines that leak, or show signs of damage or wear.

e. You should know how fluid leaks affect the status of your equipment. Learn and be familiar with the following definitions of the types/classes of leakage. Remember—when in doubt, notify your supervisor!

Leakage definitions for PMCS are:

CLASS I Seepage of fluid (indicated by wetness or discoloration) not great enough to form drops.

CLASS II Leakage of fluid great enough to form drops but not enough to cause drops to drip from the item being checked/inspected.

CLASS III Leakage of fluid great enough to form drops that fall from the item being checked/inspected.

CAUTION

Equipment operation is allowable with minor leakage (Class I or II). Of course, consideration must be given to the fluid capacity in the item/system being checked/inspected. When in doubt, notify your supervisor.

Class III leaks should be corrected before releasing equipment for operation.

Table 3-1. Organizational Preventive Maintenance Checks and Services

Q—Quarterly S—Semiannually A—Annually B—Biennially H—Hours MI—Miles

Item No.	Interval Q	S	A	B	H	MI	ITEM TO BE INSPECTED Procedure
							NOTE
							PERFORM OPERATOR/CREW PMCS PRIOR TO OR IN CONJUNCTION WITH ORGANIZATIONAL PMCS.
							PERFORM VISUAL INSPECTION OF THE FOLLOWING:
1	•						*a.* Check safety chain for damage or broken links and mounting.
	•						*b.* Inspect frame, tool boxes, deck plates, step ladder, folding steps, lunette, and leveling jack for evidence of damage (breaks, cracks, bent members, or broken welds). Check for freedom of movement.
2	•						BRAKES AND WHEEL BEARINGS
	•						*a.* Check fluid level in master cylinder. Fluid level should be within 1/2 inch from the filler opening.
	•						*b.* Check hand brakes for proper operation. Adjust as necessary.
	•						*c.* Inspect hoses, lines, and fittings for leakage, security, and condition.
			•				*d.* Remove pipe plug from bottom of air filter, drain filter and install plug.
			•				*e.* Remove wheels, hubs and wheel bearings. Clean, inspect, and repack wheel bearings. Replace as necessary.
			•				*f.* Clean, inspect, and repair/replace brake internal components.
				•			*g.* Adjust brake shoes (after reassembly if disassembled).
3				•			WHEELS AND TIRES
							Tighten lug nuts to 450-500 lb-ft of torque.
4	•						SUSPENSION SYSTEM
							Check torsion bars or springs, shock absorbers and radius rods for damage. Tighten all assembly and mounting hardware, e.g., bolts, U-bolts, etc.
5		•					ELECTRICAL SYSTEM
		•					*a.* Check wiring harness, clips, shells, grommets and junction box for damage and corrosion.
							b. Replace/repair inoperative/damaged lights or components.

Page 3-11, section VII. Add paragraph 3-17.1 as follows:

3-17.1. Bleeding Hydraulic Brake System

a. Manual Bleeding.

NOTE

The following procedure requires two people, one to operate the controls of the towing vehicle and the second to perform the required mechanical adjustment.

(1) Connect trailer brake lines to couplings of towing vehicle.

(2) Clean wheel cylinder bleeder screw ports at top and bottom of brake backing plate.

(3) Attach bleeder tube to lower cylinder port.

(4) Submerge free end of bleeder tube in approximately 3 inches of clean hydraulic brake fluid (use a clean, clear jar or bottle to hold brake fluid).

(5) Remove filler plug from top of master cylinder.

(6) Fill master cylinder reservoir with hydraulic brake fluid.

NOTE

Master cylinder reservoir must be kept full during the bleeding operation to prevent air from entering the system.

(7) Have assistant depress brake pedal of towing vehicle and hold pedal until instructed to release it.

(8) While assistant depresses brake pedal, open bleeder screw three-fourths turn counterclockwise.

(9) Close bleeder screw by turning clockwise.

(10) Instruct assistant to release brake pedal, then pump pedal to maximum height, depress and hold pedal until instructed to release it.

(11) Repeat (7), (8), (9), and (10) above until all air is purged from the line (approximately four times after last bubbles are discharged from bleeder tube).

(12) Remove bleeder tube from lower cylinder port and attach to upper cylinder port of same wheel.

(13) Refill master cylinder reservoir with brake fluid.

(14) Repeat (6) through (10) above for upper cylinder.

(15) Remove bleeder tube from upper cylinder port.

(16) Repeat (2), (3), (4), and (6) through (15) above for other wheel cylinder.

(17) Fill master cylinder reservoir to proper operating level and install filler plug in top of master cylinder.

b. Pressure Feed Filler Bleeding.

NOTE

A towing vehicle is not required to perform this procedure.

(1) Clean wheel cylinder bleeder screw ports at top and bottom of brake backing plate.

(2) Attach bleeder tube to lower cylinder port.

(3) Submerge free end of bleeder tube in approximately 3 inches of clean hydraulic brake fluid (use a clean, clear jar or bottle to hold brake fluid).

(4) Remove filler plug from top of master cylinder. With proper size adapter, connect pressure feeder hose to filler port in top of master cylinder.

(5) Open bleeder screw three-fourths turn counterclockwise.

(6) Observe air bubbles discharged from free end of bleeder tube. When flow of air bubbles stops, close bleeder screw by turning clockwise.

(7) Remove bleeder tube from lower cylinder port and attach to upper cylinder port of same wheel.

(8) Repeat (5) and (6) above for upper cylinder.

(9) Remove bleeder tube from upper cylinder.

(10) Repeat (1) through (3) and (5) through (8) above for other wheel cylinder.

(11) Disconnect pressure feeder hose from master cylinder filler port.

(12) Fill master cylinder reservoir to proper operating level and install filler plug in top of master cylinder.

Page 3-13, paragraph 3-21*b.* Add "(para 3-17.1)".

Page 3-14.

Paragraph 3-23*b.* Add "(para 3-17.1)".

Paragraph 3-25*d,* change "Assembly of Master Cylinder" to "Disassembly of Master Cylinder".

Paragraph 3-25*f* is superseded as follows:

f. Installation.

(1) Install air chamber and master cylinder by reversing procedure in *a* above.

(2) Bleed brake system (para 3-17.1).

Paragraph 3-26 is superseded as follows:

3-26. Wheel Cylinder (M514 and XM545)

(fig. C-16)

a. Removal. Refer to paragraphs 3-20*i* and *j* to remove wheel cylinder.

b. Disassembly.

(1) Remove bolt securing multiple fluid pressure line fitting to cylinder. Remove flat washer, fitting and inner gasket.

(2) Remove bleeder valve.

c. Assembly. Assemble wheel cylinder by reversing procedure in *b* above.

d. Installation.

(1) Install the wheel cylinder by reversing the procedure in paragraphs 3-20*i* and *j.*

(2) Bleed brake system (para 3-17.1).

Paragraph 3-27 is superseded as follows:

3-27. Wheel Cylinder (M390 and M390C)

(fig. C-17)

a. Removal. Refer to paragraphs 3-22*h* through *m* to remove wheel cylinder.

b. Disassembly. Remove bleeder valve from cylinder.

c. Assembly. Install bleeder valve on cylinder.

d. Installation.

(1) Install the wheel cylinder by reversing the procedure in paragraphs 3-22*h* through *m.*

(2) Bleed brake system (para 3-17.1).

Page 3-15, paragraph 3-28*c.* Change NOTE from "these

refer to figure C-23 under otherwise indicated" to, "these refer to figure C-23 unless otherwise indicated."

Page B-2, Section III.

Group 1201

Column (3), under "Install". Delete "O".

Column (3), under "Replace". Change "F" to "O".

Group 1313, Column (3), under "Repair". Change "F" to "O".

Page C-1. Change the title of appendix C to read:

BASIC ISSUE ITEMS LIST AND ITEMS TROOP INSTALLED OR AUTHORIZED LIST AND ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST

Paragraph C-2*a* is superseded as follows:

a. Basic Issue Items List—Section II. A list, in alphabetical sequence, of items which are furnished with, and which must be turned in with, the end item.

Paragraph C-2*c.* Change "Section II" to "Section III".

Paragraph C-2*d.* Change "Section III" to "Section IV".

Paragraph C-2*e.* Change "Section IV" to "Section V".

Page C-3, paragraph C-4. Add subparagraph *i* as follows:

i. The following forms and publications are furnished with the equipment.

(1) DA Form 2408-8	Publications form, Equipment Acceptance and Registration Record (1 each)
(2) DA Form 2409	Form, equipment, Maintenance log, Consolidated (1 each)
(3) DA Form 2408-7	Form, Equipment Transfer Record (1 each)
(4) TM 9-2330-235-14	Operators, Organizational, Direct and General Support Maintenance Manual (1 each)

Page C-4. Add Section II. BASIC ISSUE ITEMS LIST.

Section II. Basic Issue Items List

(1) SMR code	(2) National stock number	(3) Description	Usable on code	(4) Unit of meas	(5) Qty furn with equip	(6) Illustrations (a) Figure No.	(6) Illustrations (b) Item No.
PACZZ	2590-00-679-5692	Crank, hand: leveling jack M514, XM545 8740154 (19207)		EA	3		
PACZZ	2590-00-860-0533	Crank, hand: leveling jack M390C M390 10885456 (19207)		EA	3		
				EA	5		
PACZZ	9905-00-205-2795	Reflector, indicating: clearance, red, M514, XM545 MS35387-1 (96906)		EA	2		
PACZZ	9905-00-202-3639	Reflector, indicating: clearance, yellow M514, XM545, MS35387-2 (96906)		EA	2		
PACZZ	5305-00-655-9572	Screw, tapping, slotted pan head: M514, XM545, 171765 (19207)		EA	8		

Page C-18. Figure C-24 is superseded as follows.

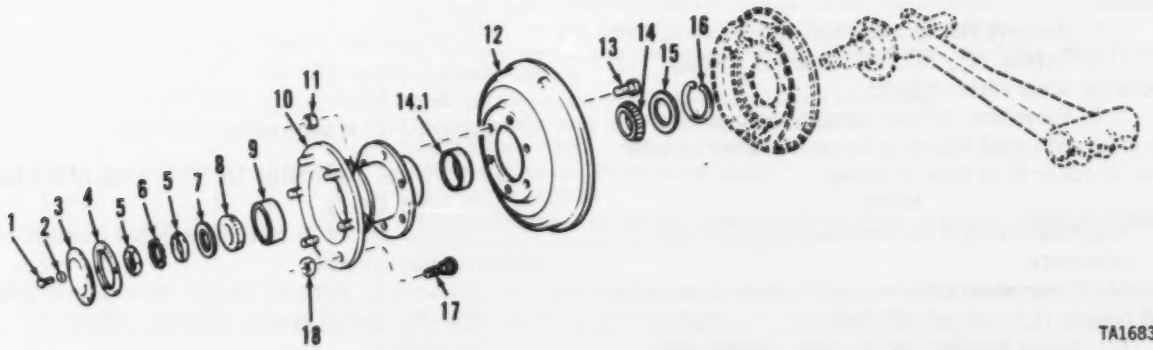


Figure C-24. Hub and drum assembly (M514, XM545).

Page C-20. Figure C-28 is superseded as follows.

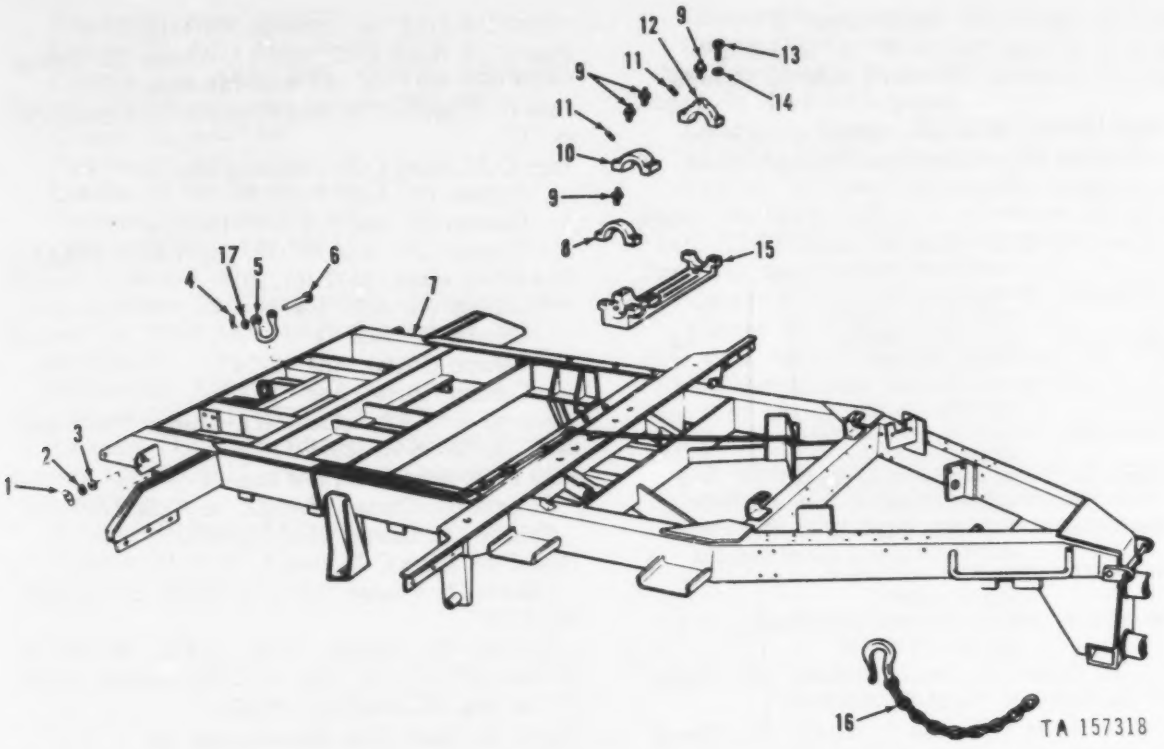


Figure C-28. Shackle and associated parts (M514, XM545).

e C-24. Figure C-33 is superseded as follows.

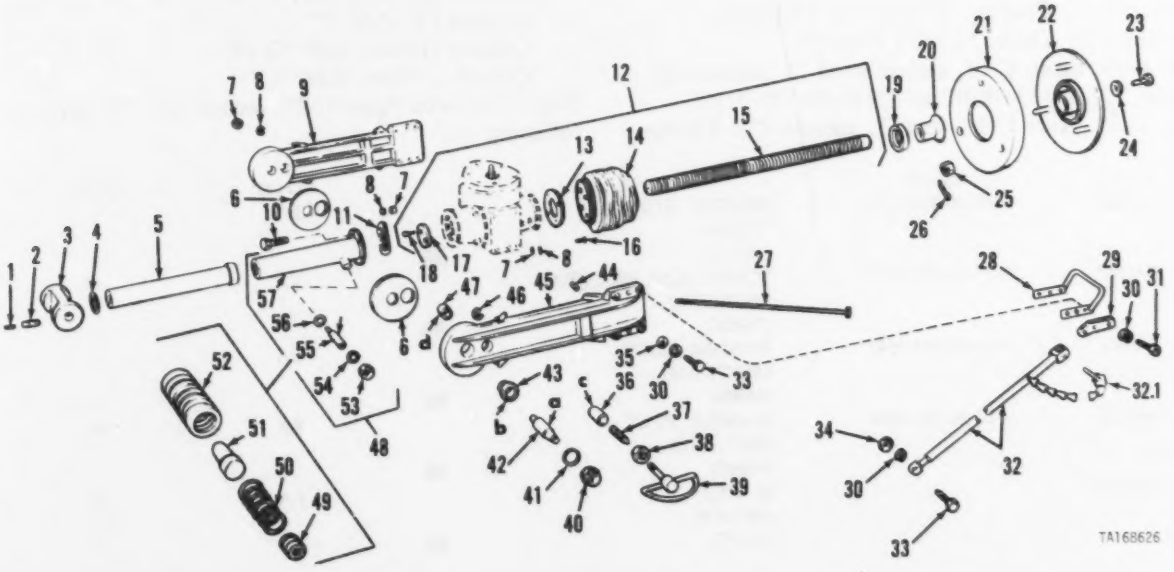


Figure C-33. Leveling jack and associated parts (M514, XM545).

Page C-26, figure C-37. Delete callout "5".

Page C-36. Change "Section II" to "Section III".

Page C-37, following C-3, item 1. Add the following:

NOTE

The following items are required to adapt the composite taillight assembly to models with the old taillight configuration.

Col (2)	*Col (3)*	*Col (5)*
5305-00-269-3208	SCREW, CAP, HEX HEAD MS90725-57 (96906)	4
5310-00-061-1258	WASHER, LOCK MS45904-76 (96906)	4
6145-00-772-0853	CABLE, ELECTRICAL 7720853 (19207)	AR
9905-00-752-4649	BAND, MARKER, BLNK-ALUMN MS39020-1 (96906)	4
5935-00-900-6281	ADAPTER, CONNECTOR MS27147-1 (96906)	1
5935-00-833-8561	CONNECTOR, ELECTRICAL 8338561 (19207)	4
5970-00-833-8562	INSULATOR, BUSHING 8338562 (19207)	4
5940-00-399-6676	TERMINAL ASSEMBLY 8338564 (19207)	4
5975-00-497-2158	STRAP, TIEDOWN, ELECTRICAL MS17821-1-9 (96906)	8

Page C-38, figure C-4, item 9, column (2). Change "5325-720-6300" to "5325-00-285-8363".

Page C-39, figure C-5, item 9, column (2). Change "5340-657-9793" to "5340-00-886-9459".

Page C-41, figure C-9, item 7.

Column (1). Change "PAOZZ" to "XBOZZ".

Column (2). Delete "2530-169-5741".

Page C-43, figure C-11, item 1.

Column (1). Change "PAOZZ" to "XBOZZ".

Column (2). Delete "2530-135-9031".

Fage C-48, figure C-13, second item 12, column (2). Change "2530-133-9830" to "2530-00-791-0110".

Page C-50, figure C-17, item 1, column (2). Change "2530-318-1115" to "2530-00-274-4510".

Page C-55, figure C-22, item 17, column (2). Change "4730-421-9087" to "4730-00-018-9566".

Page C-57, figure C-24, item 9, column (5). Change "2 to "1".

Page C-58, figure C-24. Following item 14:

Column (1). Add "PAOZZ".

Column (2). Add "3110-00-100-0567".

Column (3). Add "CUP, TAPERED ROLLI BEARING: wheel 28622 (61220)".

Column (4). Add "EA".

Column (5). Add "1".

Column (10)(a). Add "C-24".

Column (10)(b). Add "14.1".

Second item 17, column (2). Change "5306-866-0038" to "5306-00-383-4957".

Page C-59, figure C-25, first item 14.

Column (1). Change "PAOZZ" to "XBOZZ".

Column (2). Delete "2530-986-0192".

Page C-60, figure C-28, item 4.

Column (2). Change "5315-732-8934" to "5315-00-012-0123".

Column (3). Change "PIN, LOCK: shackle pin 7328934 (19207)" to "PIN, COTTER: shackle, 1/8 dia, 1 1/4 in. long, MS24665-355 (96906)".

Page C-61, figure C-28, following item 16.

Column (1). Add "PAOZZ".

Column (2). Add "5310-00-823-8803."

Column (3). Add "WASHER, FLAT: 0.656 I.I 1.312 O.D., 0.095 THK, MS27183-21 (96906)".

Column (4). Add "EA".

Column (5). Add "2".

Column (10)(a). Add "C-28".

Column (10)(b). Add "17".

Page C-63, after figure C-29, second item 32. Add the following:

Col (1)	*Col (2)*	*Col (3)*		*Col (4)*	*Col (5)*
PAOZZ	5340-00-656-3638	BUMPER, RUBBER 7522436 (19207)	BB	EA	4
PAOZZ	5305-00-207-4525	SCREW, CAP, HEX HEAD MS35292-62 (96906)	BB	EA	4
PAOZZ	5310-00-637-9541	WASHER, LOCK MS35338-46 (96906)	BB	EA	4
PAOZZ	5310-00-080-6004	WASHER, FLAT MS27183-14 (96906)	BB	EA	4
XBOZZ		SPACER 10914370 (19207)	BB	EA	4

Fage C-63, figure C-30, item 4.

Column (2). Change "2540-735-4577" to "2540-00-999-5584".

Column (3). Change "7354577" to "11592597".

Page C-65, figure C-31, item 31, column (2). Change "5315-054-2302" to "5315-00-058-6011".

Page C-66, figure C-32, item 15, column (2). Change "2590-725-5270" to "5340-00-495-7212".

Page C-69, following figure C-33, item 32, add the following:

Column (1). Add "PAOZZ".
Column (2). Add "5340-01-046-0273".
Column (3). Add "PIN, QUICK RELEASE 8759898 (19207) and usable on code "BD, BE".
Column (4). Add "EA".
Column (5). Add "1".
Column (6) through (9). Add "*".
Column (10)(a). Add "C-33".
Column (10)(b). Add "32.1".

Page C-74, figure C-37.

Item 4, column (3). Change "PAD ASSEMBLY: jack tiedown" to "PAD ASSEMBLY: jack tiedown, right".

After item 4.
Column (1). Add "PAOZZ".
Column (2). Add "2590-00-226-6214".
Column (3). Add "PAD ASSEMBLY: jack tiedown, left 10906417 (19207)" and usable on code "BD, BE".
Column (4). Add "EA".
Column (5). Add "1".
Column (10)(a). Add "C-37".
Column (10)(b). Add "4".

Item 5 is deleted in its entirety.

Page C-75, figure C-37, item 6.
Column (3). Change "RUBBER, STRIP: tiedown" to "RUBBER, STRIP: jack tiedown, left and right".
Column (5). Change "1" to "2".

Page C-76, figure C-38, item 20, column (2). Change "3110-752-0775" to "5315-00-576-8653".

Page C-81, figure C-40, item 27.
Column (1). Change "PAFZZ" to "XBFZZ".
Column (2). Delete "5305-812-4766".

Page C-82, figure C-42, item 3, column (2). Change "5340-679-4580" to "5365-00-721-6342".

Page C-86. Change "Section III" to "Section IV".

Page C-87. Change "Section IV" to "Section V".

All changes, additions, or deletions of stock numbers, manufacturers' codes, and part numbers with this change should be appropriately reflected in the index.

By Order of the Secretary of the Army:

E. C. MEYER
General, United States Army
Chief of Staff

Official:
J. C. PENNINGTON
Major General, United States Army
The Adjutant General

Distribution:
To be distributed in accordance with DA Form 12-39, Technical Manual requirements for: Chassis, 1 Ton and 2 Ton, M390, C, M514, XM545.

TEHNICAL MANUAL
No. 9-2330-235-14

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON D.C., *3 November 1972*

OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

TRAILER, CHASSIS: 1-TON, 2-WHEEL M514 (2330-542-5753) AND XM545 (2330-783-7574)

AND

TRAILER, CHASSIS: 2-TON, 2-WHEEL M390 (2330-446-7575) AND M390C (2330-542-3491)

Current as of 21 June 1972

			Paragraph	Page
CHAPTER 1.	INTRODUCTION			
Section I.	General		1-1—1-7	1-1
II.	Description and data		1-8—1-11	1-1, 1-2
CHAPTER 2.	OPERATING INSTRUCTIONS			
Section I.	Service upon receipt of materiel		2-1—2-3	2-1
II.	Controls		2-4—2-10	2-4, 2-5
III.	Operation		2-11—2-14	2-6
IV.	Operator preventive maintenance		2-15, 2-16	--------
CHAPTER 3.	ORGANIZATIONAL, DIRECT AND GENERAL SUPPORT MAINTENANCE			
Section I.	Parts, tools and equipment		3-1—3-7	3-1
II.	Lubrication, painting and stenciling		3-8, 3-9	3-4
III.	Preventive maintenance services		3-10	3-5
IV.	Troubleshooting		3-11—3-14	3-7—3-9
V.	Electrical system		3-15, 3-16	3-9
VI.	Hand brake system		3-17—3-27	3-11—3-14
VII.	Service brake system		3-28—3-33	3-14—3-18
VIII.	Suspension system (M514, XM545)		3-34—3-37	3-18—3-21
IX.	Suspension system (M390, M390C)		3-38, 3-39	3-21, 3-22
X.	Frame and associated parts (M514, XM545)		3-40—3-42	3-25—3-27
XI.	Frame and associated parts (M390, M390C)		3-43, 3-44	3-27
XII.	Repair standards and points of measurement			
CHAPTER 4.	SHIPMENT AND STORAGE AND DEMOLITION TO PREVENT ENEMY USE			
Section I.	Shipment and limited storage		4-1—4-4	4-1—4-4
II.	Demolition of materiel to prevent enemy use		4-5, 4-6	4-4, 4-5
APPENDIX A.	REFERENCES			A-1
B.	MAINTENANCE ALLOCATION CHART			B-1
C.	REPAIR PARTS AND SPECIAL TOOL LISTS			C-1
			Figure	Page
Group 06.	Electrical System			
0609	Lights		C-1, C-2, C-3	C-4, C-5
0613	Chassis wiring harness		C-4, C-5, C-6, C-7	C-6, C-7, C-8
11.	Rear Axle			
1100	Rear axle assembly		C-8	C-8

* This manual supersedes TM 9-2330-235-14, 9 June 1966, including all changes.

			Figure	Page
	12.	Brakes	C–9, C–10	C–9, C–10
	1201	Handbrakes	C–11, C–12, C–13	C–10, C–11
	1202	Service brakes	C–14 thru C–18	C–12 thru C–14
	1204	Hydraulic brake system	C–19, C–20, C–21, C–22	C–15, C–16, C–17
	1208	Air brake system		
Group	13.	Wheels and Suspension	C–23	C–17
	1301	Suspension assembly	C–24, C–25, C–26	C–18, C–19
	1311	Wheel assembly	C–27	C–19
	1312	Tires, tubes and valves		
	15.	Frame Towing Attachments, Drawbars and Articulation Systems	C–28, C–29	C–20, C–21
	1501	Frame assembly	C–30	C–22
	1503	Pintle and towing attachments	C–31 thru C–40	C–22 thru C–29
	1507	Landing gear leveling jacks		
	16.	Springs and Shock Absorber	C–41, C–42	C–30
	1601	Springs	C–43, C–44	C–31
	1605	Torque radius and stabilizer rods		
	18.	Body	C–45, C–46	C–32
	1801	Body assembly		
	22.	Body Chassis and Hull Accessory Items	C–47	C–33
	2202	Accessory items	C–48	C–34
	2210	Data plates		
	26.	Tools	C–49	C–35
	2604	Special tools		
INDEX				Index 1

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1–1. Scope

This manual contains the instructions for Operator's, Organizational, Direct Support, and General Support Maintenance and Repair Parts Special Tools List for the 1-Ton, 2-Wheel Chassis Trailers, M514 and XM545, and the 2-Ton, 2-Wheel Chassis Trailers M390 and M390C.

1–2. Forms and Records

Maintenance forms, records and reports which are to be used by maintenance personnel at all levels are listed in and prescribed by TM 38–750. Refer to DA Pam 310–2 for a current and complete list of blank forms.

1–3. Reporting of Equipment Publication Improvements

The reporting of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications) and forwarded direct to Commander, U.S. Army Tank-Automotive Command, ATTN: AMSTA–MAP, Warren, MI 48090.

1–4. Equipment Serviceability Criteria (ESC)

This equipment is not covered by an ESC.

1–5. Destruction of Army Materiel to Prevent Enemy Use

See TM 750–244–6 covering the destruction of Army materiel to prevent enemy use; also, see chapter 4.

1–6. Administrative Storage

Refer to TM 740–90–1. Requirements in addition to or different from TM 740–90–1 are included in chapter 5.

1–7. Calibration

This equipment does not require calibration.

Section II. DESCRIPTION AND DATA

1–8. Description

The 1-ton, 2-wheel chassis trailers M514 (fig. 1–1) and XM545 (fig. 1–2), and the 2-ton, 2-wheel chassis trailers M390 (fig. 1–3) and M390C (fig. 1–4) are designed for a minimum air supply of 100 PSI and a 24 volt electrical system.

1–9. Differences Between Models

The differences between the four trailers are limited to minor variations between the 1-ton trailers M514 and XM545, and 2-ton trailers M390 and M390C. Generally, these differences are confined to the frame, suspension system, swivel caster with hub assembly or retractable support assembly, and leveling jacks.

1–10. Name, Caution, and Instruction Plates

The trailer identification and instruction plates on the M514 and XM545 are located on the front of the chassis channel crossmember. The trailer identification and instruction plates on the M390 and M390C are located on the outside of the drawbar right rail.

1–11. Tabulated Data

a. General.

	M514	*XM545*
Manufacturer	Fruehauf Trailer Co.	Fruehauf Trailer Co.

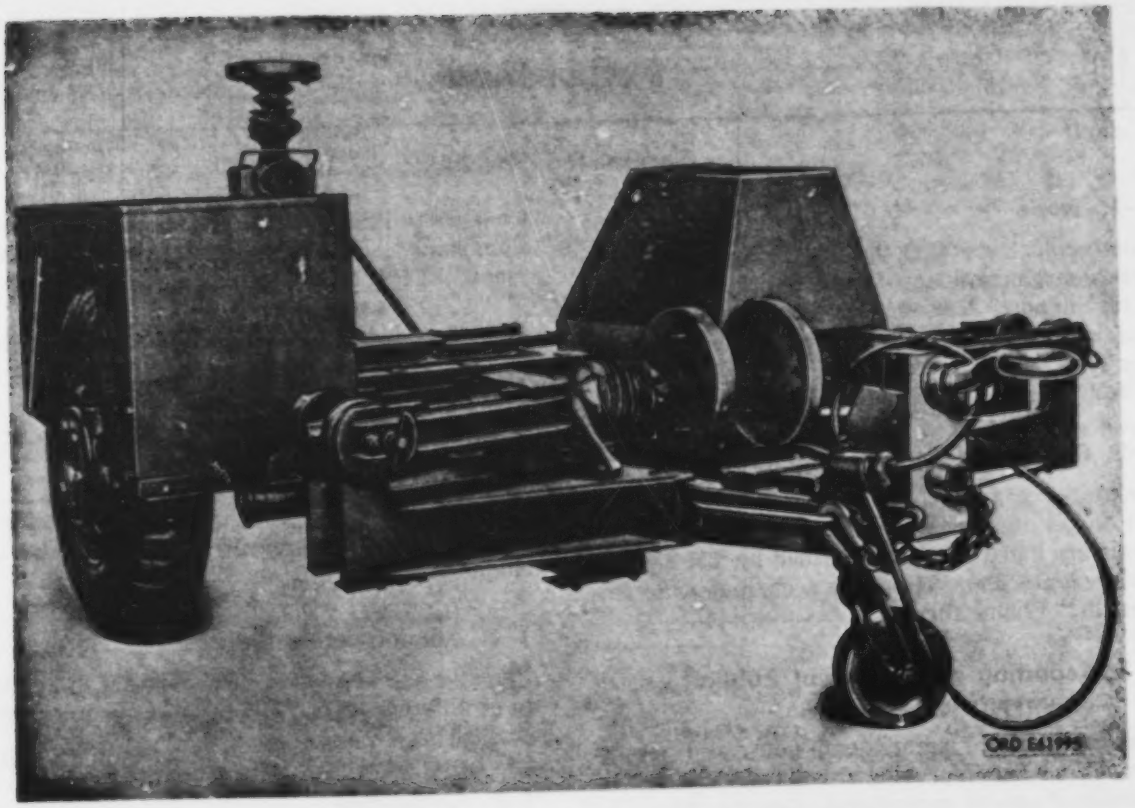


Figure 1–1. 1-ton, 2-wheel chassis trailer, M514—right front view.

	M390	M390C
Weights:		
Chassis	2250-lb	2250-lb
Payload	2460-lb	2460-lb
Total	4710-lb	4710-lb
Dimensions overall:		
Ground clearance	10¾-in.	10¾-in.
Floor height (loaded)	22-in.	22-in.
Width	94-in.	90 7/16-in.
Length	171-in.	171-in.
Angle of departure	28 deg	28 deg
Maximum towed speed:		
Highway	50 mph	50 mph
Cross-Country	25 mph	25 mph
Manufacturer	Eidal Mfg. Co.	Eidal Mfg. Co.
Weights:		
Chassis	3130-lb	3130-lb
Payload	2760-lb	2760-lb
Total	5890-lb	5890-lb
Dimensions overall:		
Ground clearance	17-in.	17-in.
Floor height (loaded)	36¾-in.	36¾-in.
Width	97¼-in.	97¼-in.
Length	185⅛-in.	185⅛-in.
Angle of Departure	30 deg	30 deg
Maximum towing speed:		
Highway	50 mph	50 mph
Cross-Country	25 mph	25 mph

b. Electrical System (All Models).

24 volts

c. Hand Brakes (All Models).

Actuation	Mechanical

d. Service Brakes (All Models).

Actuation	air over hydraulic
Operating air pressure	100 psi

e. Wheels (All Models).

Type	Military offset disk
Rim size	20 x 7.5

f. Tires (All Models).

Type	Military, 8 ply non-directional tread
Size	9.00–20
Inflation pressure:	
Highway	50 psi
Cross-country	35 psi
Mud, sand and snow	15 psi

g. Suspension System.

M514–XM545	Torsion bar
M390–M390C	Leaf springs

h. Number of Leveling Jacks.

M514–XM545	3
M390	5
M390C	3

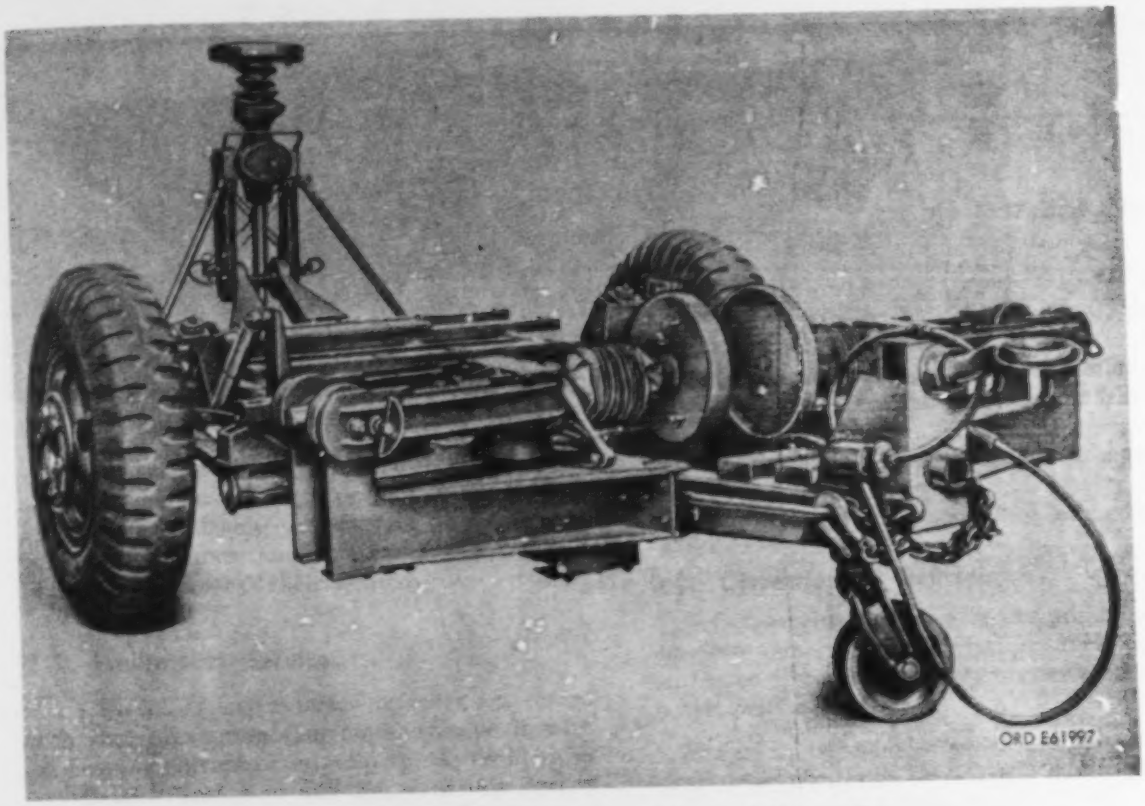


Figure 1–2. 1-ton, 2-wheel chassis trailer, XM545—right front view.

Figure 1–3. 2-ton, 2-wheel chassis trailer, M390—right front view.

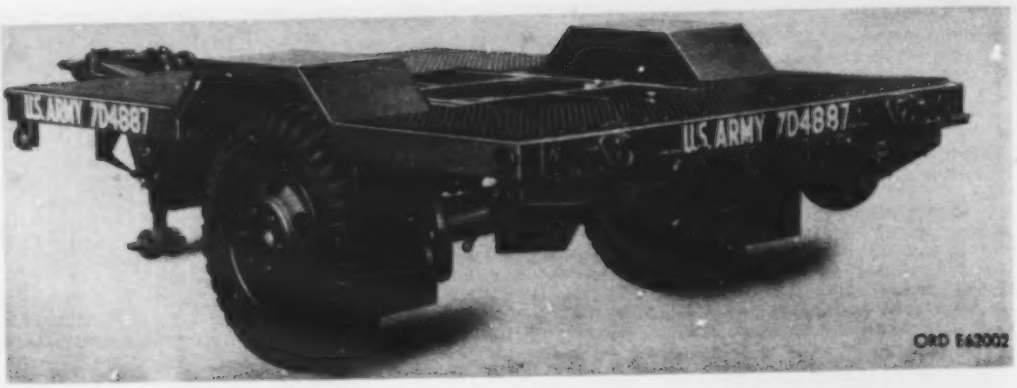


Figure 1–4. 2-ton, 2-wheel chassis trailer, M390C—left rear view.

CHAPTER 2

OPERATING INSTRUCTIONS

Section I. SERVICE UPON RECEIPT OF MATERIEL

2–1. Purpose

a. When new, used, or reconditioned materiel is first received by the using organization, it is the responsibility of the officer-in-charge to determine whether the materiel has been properly prepared for service by the supplying organization and to be sure it is in condition to perform its function.

b. Services to be performed by the operator, crew, or user are designated in paragraph 2–2. Whenever practicable, the operator, crew, or user will assist organizational maintenance personnel in the performance of their services.

2–2. Preliminary Services

a. General. If any exterior surfaces are coated with rust preventive compound, remove it with drycleaning solvent or mineral spirits paint thinner. Read "Processing and Deprocessing Record for Shipment, Storage, and Issue of Vehicles and Spare Engines," DD Form 1397, and follow all directions carefully.

b. Specific Procedures.

(1) Perform the "S" (semi-annual) preventive maintenance (table 3–1).

(2) Lubricate all lubrication points illustrated in the Lubrication Chart regardless of interval.

(3) Schedule second "S" (semi-annual) preventive maintenance service.

(4) Perform a "break-in" of 25 miles.

2–3. Correction of Deficiencies

a. Deficiencies disclosed during preliminary inspection and servicing or during break-in period will be corrected by the using organization or supporting maintenance.

b. Serious deficiencies which appear to involve unsatisfactory design or material will be reported in accordance with TM 38–750.

Section II. CONTROLS

2–4. General

This section furnishes information pertaining to the various controls provided for the proper operation of the materiel. Refer to figures 2–1 and 2–2.

2–5. Lights

The trailer taillight, stoplight assembly, and blackout stoplight assembly are operated by the light switch on the towing vehicle.

2–6. Hand Brakes

a. M514 and XM545. The two hand brake levers are located near the front of the trailer, one beneath each front leveling jack bracket support. Pull levers toward front of trailer to apply brakes. Push levers toward rear of trailer to release brakes.

b. M390 and M390C. The two brake levers are located near the front of the trailer, one on each side of the trailer drawbar. Moving the levers to the vertical position applies the brakes and moving the levers to the horizontal position releases the brakes.

2–7. Service Brakes

The trailer service brakes are actuated by an air-over-hydraulic system. Air pressure for the service brakes is received from the towing vehicle through the intervehicular hose. The controls are located in, and are a part of the towing vehicle.

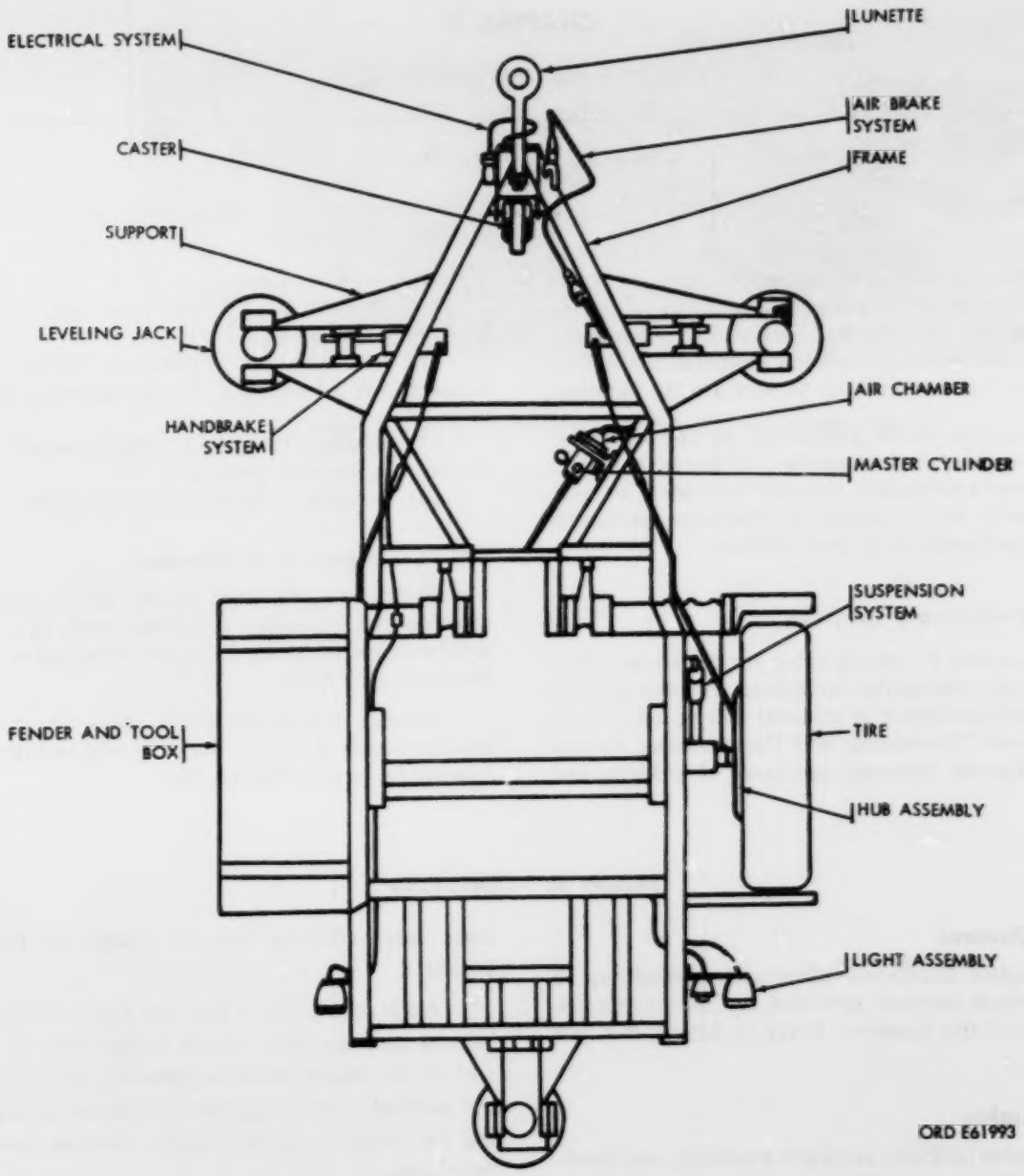


Figure 2–1. Location of controls and components (M514 and XM545).

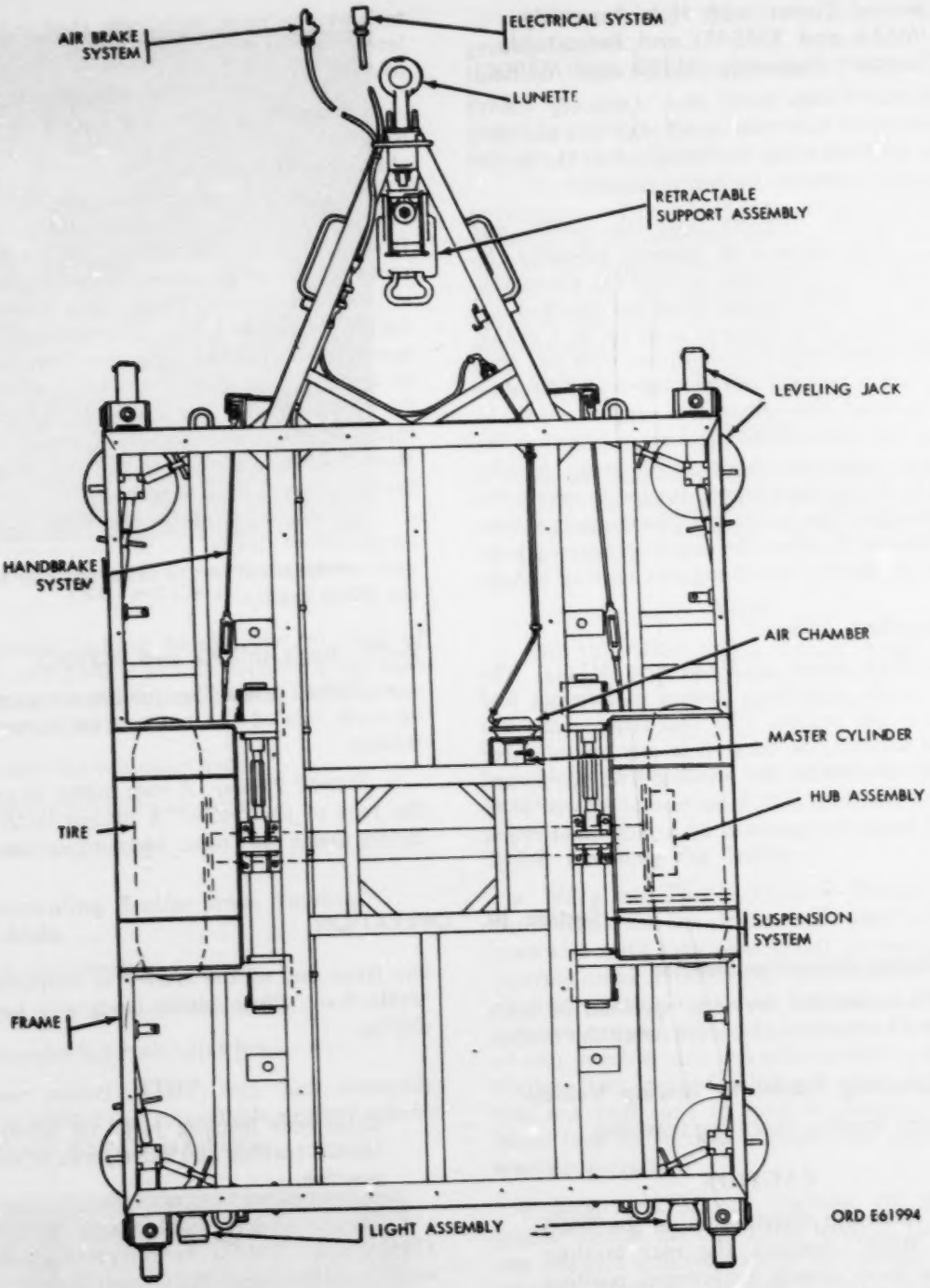


Figure 2-2. Location of controls and components (M390 and M390C).

2–8. Swivel Caster with Hub Assembly (M514 and XM545) and Retractable Support Assembly (M390 and M390C)

a. Swivel Caster with Hub Assembly (M514 and XM545). The swivel caster with hub assembly is used for supporting the front end of the trailer when not attached to a towing vehicle.

b. Retractable Support Assembly (M390 and M390C). The retractable support assembly, located near front of trailer, is used for supporting the front end of the trailer when not attached to a towing vehicle. The support consists of a crank-operated, screw-type jack equipped with two steel wheels and a ground pad for increased flotation on soft ground. The retractable support crank, located on the left side of support, is bolted to the retractable support input bevel gear. A clip, welded to the support frame, is used to secure the crank handle when not in use. The support assembly is secured in either the raised or lowered position by the spring-loaded support locking handle.

2–9. Leveling Jacks

a. Leveling Jacks (XM545 and M514). The leveling jacks provide a means of leveling and stabilizing the trailer. The two front jacks are identical and may be secured in any one of three positions: downward for leveling trailer, upward in stowed position, and in horizontal stowed position. All jacks are operated by a jack hand crank to lower or raise each jack shoe until trailer is level. The three hand cranks are stowed in trailer tool box.

b. Leveling Jacks (M390 and M390C). The leveling jacks provide a means of leveling and stabilizing the trailer.

(1) *M390 Trailer.* Jacks are mounted at the four corners of the trailer and in the center of the front structural member of the frame. The two jacks on the front corners are mounted in single swiveling supports. Three jacks are mounted in double swiveling supports containing two control handles. All leveling jacks are lowered or raised by a crank. The socket at the end of the crank is for normal speed; the socket in the center of the crank is the speed socket. The five cranks are stowed in brackets welded to the underside of the frame adjacent to each jack.

(2) *M390C Trailer.* The three leveling jacks on the M390C trailer are the double-swiveling type and are operated in the same manner as those on the M390 trailer.

2–10. Steps (M390 and M390C)

a. M390 Trailer. Two folding steps are provided on each side of the trailer just forward of the wheels.

b. M390C Trailer. A step ladder is provided at the rear of the trailer. A hinged latch holds the ladder under the frame when not in use.

Section III. OPERATION

2–11. Before-Operation Service

The before-operation services, specified in table 2–1, should be performed before using the trailer.

2–12. Coupling Trailer to Towing Vehicle

a. Secure leveling jacks for traveling.

CAUTION

Due to weight distribution on the M390 and M390C trailers, the rear leveling jacks must remain in lowered position until trailer is coupled to towing vehicle.

b. Couple trailer to towing vehicle as follows:

(1) *M514 and XM545 Trailers.* Secure trailer lunette in towing vehicle pintle, close pintle latch and hook safety chains.

(2) *M390 and M390C Trailers.* Position trailer lunette in towing vehicle pintle. Lower the retractable support assembly until the weight of the front end of the trailer is supported by the pintle hook. Close pintle latch and hook safety chains.

NOTE

Raise rear leveling jacks on M390 and M390C trailers and move jacks to stowed position.

c. Secure swivel caster with hub assembly (M514 and XM545) or retractable support assembly (M390 and M390C) as follows:

(1) *M514 and XM545 Trailers.* Pull out spring-loaded lock pin in upper end of caster swivel and raise swivel caster with hub assembly until lock pin enters upper locking hole. Install gravity pin (fig. 2–3) through holes in caster and frame bracket.

(2) *M390 and M390C.* Crank the retractable support wheels as high as they will go and engage crank handle in stowage clip. Pull the spring-

Figure 2–3. Swivel caster in raised position (M514 and XM545).

loaded support locking handle toward rear of trailer and pull ground pad upward until the ends of the locking handle engage locking holes in top of lunette mounting bracket.

d. Connect intervehicular hose.

e. Connect intervehicular cable.

f. Release hand brakes.

2–13. Uncoupling Trailer from Towing Vehicle

a. Apply hand brakes.

b. Disconnect intervehicular cable.

c. Disconnect intervehicular hose.

d. Lower swivel caster with hub assembly (M514 and XM545) or retractable support assembly (M390 and M390C) as follows:

Figure 2–4. Retractable support assembly in raised position (M390 and M390C).

(1) *M514 and XM545 Trailers.* Remove gravity pin (fig. 2–3) from caster and frame bracket. While supporting caster, pull spring-loaded lock pin out as far as possible, and allow caster to swing down to lowered position. Release lock pin to lock caster in lowered position.

(2) *M390 and M390C Trailers.* While supporting ground pad, lower the retractable support assembly to the vertical position. Make sure the ends of the locking handle engage the holes in the bracket. Lock the support. Remove the support crank handle from its stowage clip, and lower the support wheels until they touch the ground.

e. Unhook safety chains.

CAUTION

On the M390 and M390C trailers, place both rear leveling jacks in support position before unhooking trailer from towing vehicle.

NOTE

On the M390 only, engage hooks of safety chains in S-hooks on trailer drawbar and tighten turnbuckles until chains are drawn tight on each side.

f. Raise pintle latch and unhook lunette from pintle.

2–14. Leveling the Trailer

a. M514 and XM545 Trailers. Install the jack hand crank on the drive shaft and turn crank clockwise until jack shoe firmly contacts ground. Operate crank as necessary until desired height is obtained. Repeat operation for second front jack. Remove support pin from supports on each side of rear leveling jack and allow supports to rest on trailer. Pull spring loaded retractor out and rotate one half turn to hold in released position. Move jack to vertical position and complete the leveling operation.

b. M390 and M390C Trailers. On the M390 trailer unlock the two front leveling jacks using the support control handle and swing jacks to vertical position. Operate crank until desired height is obtained. On the three double swiveling jack supports, unlock the jack support using the control handle farthest from the jack and rotate support until control handle locks in place. Using the second control handle swing jack to vertical position and repeat operation as on front jacks. On the M390C trailer repeat operations for double swiveling jack supports to move jacks to vertical position and lower jack float to ground.

Section IV. OPERATOR PREVENTIVE MAINTENANCE

2–15. General Procedures for Driver or Operator

The daily preventive-maintenance service is a systematic inspection of the vehicle each day it is operated so that defects may be discovered and corrected before they result in serious damage or failure. This service is performed by the operator and is divided into three parts, as indicated in *a* through *c* below. Any defects or unsatisfactory operating characteristics noted during any part of this service, beyond the scope of the operator, will be reported to the designated authority at the earliest opportunity.

a. Before-Operation Service. This is a brief service to ascertain that the materiel is ready for operation; it mainly a check to see if conditions affecting the materiel's readiness have changed since the last after-operation service.

b. During-Operation Service. This service consists of detecting unsatisfactory performance. While driving, the driver of the towing vehicle should be alert for any unusual noises, steering irregularities, or any other indications of malfunction of any part of the materiel. Every time he applies the brakes, shift gears, or turns the vehicle, the driver should instinctively consider it a test and note any unusual or unsatisfactory performance.

c. After-Operation Services. This service consists of investigating any deficiencies noted during operation and repeating part of the before-operation service. It is the basic daily service for tactical materiel and consists of correcting, insofar as possible, any operating deficiencies.

2–16. Specific Procedures for Driver or Operator

Table 2–1 gives the specific procedures to be performed on the materiel by the operator in the daily service.

Table 2–1. Preventive Maintenance Checks and Services

Operator — Daily Schedule

Interval and sequence No.			Items to be inspected	Procedure	Paragraph or figure reference
Before Operation	During Operation	After Operation			
				Caution. Place all tags describing condition of the vehicle in a conspicuous location so that they will not be overlooked.	
1			Tires	Gage tires for correct pressure. Remove penetrating objects such as nails or glass. Note any apparent loss of air, unusual wear, or missing valve caps.	Para 1–11
2			Wheels	Inspect wheel stud nuts and hub cover screws to see that they are present and secure.	
3			Intervehicular hose	Inspect hose to see that it is in good condition and securely connected.	
4			Intervehicular cable	Inspect cable to see that it is in good condition and that all connectors are correctly assembled and secured in the mounting clips.	
5			Hydraulic tubes and hoses.	Look under vehicle and observe hydraulic tube and hose connections for indication of brake fluid leaks.	
6			Basic issue items	Check to see that all basic issue items are on the vehicle and properly stowed.	Appendix C
7			Lights	Operate taillights (if tactical situation permits) and observe functioning. Visually inspect reflectors.	
8			Frame	Visually inspect frame, towing lunette and safety chains.	
	9		General operation	Be alert for any unusual noises or improper operation of brakes, swivel caster with hub or retractable support, and leveling jacks.	
		10	Operating faults	Operating faults. Investigate and correct or report any faults noted during operation.	
		11	Suspension system	Inspect suspension system and associated mounting parts to see if they have been damaged.	
		12	Air filter	Remove pipe plug from bottom of air filter, drain filter, and install plug.	
		13	Lubricate	Lubricate items specified on lubrication chart	Fig. 3–1, 3–3
		14	Clean	Wipe off exterior of trailer. Wash trailer if required	

Table 2–1. Preventive Maintenance Checks and Services—Continued

Daily Schedule

Operator

Interval and sequence No.			Items to be inspected	Procedure	Paragraph or figure reference
Before Operation	During Operation	After Operation			
		15	Miscellaneous assemblies	Inspect assemblies such as air filter, air chamber and master cylinder, swivel caster with hub or retractable support, hand brake levers for looseness of mountings or connections.	
		16	Electric wiring	Check wiring harness to see that it is securely connected and supported, and that insulation is not cracked or chafed.	

CHAPTER 3

ORGANIZATIONAL, DIRECT AND GENERAL SUPPORT MAINTENANCE

Section I. PARTS, TOOLS AND EQUIPMENT

(Refer to Appendix B, Section III)

Section II. LUBRICATION, PAINTING AND STENCILING

3–1. Lubrication Charts

a. The cleaning and lubricating procedures as to location, intervals, and proper materials are prescribed in the lubrication charts (Fig. 3–1, M514 and XM545; Fig. 3–2, M390 and M390C). Lubrication which is to be performed by supporting maintenance personnel is listed on the lubrication charts under the heading NOTES.

b. Any special lubricating instructions required for specific mechanisms or parts are contained in the pertinent section.

3–2. General Lubrication Instructions Under Unusual Conditions

Reduce service intervals specified on the lubrication charts (i.e., lubricate more frequently) to compensate for abnormal or extreme conditions, such as high or low temperatures, prolonged periods of high-speed operations, continued operation in sand or dust, immersion in water, or exposure to moisture. Any one of these conditions may cause contamination and quickly destroy protective qualities of lubricants. Intervals may be extended during inactive periods commensurate with adequate preservation.

3–3. Lubrication for Continued Operation Below 0° F.

Refer to TM 9–207 for instructions on necessary special preliminary lubrication of the vehicle.

3–4. Lubrication After Fording Operations

After any fording operation, lubricate all chassis points to cleanse bearings of water or grit.

3–5. Lubrication After Operations Under Dusty or Sandy Conditions

After operation under dusty or sandy conditions, clean and inspect all points of lubrication for fouled lubricants. Lubricate as necessary.

3–6. Painting

Instructions for the preparation of the material for painting and methods of painting are contained in TM 5–618. Instructions for camouflage painting are contained in FM 5–20.

3–7. Vehicle Stenciling

Refer to TB 746–93–1 for vehicle stenciling procedures.

WARNING

To prevent injury to personnel, avoid excessive inhalation of vapors. All cleaning and stenciling procedures must be performed in a well ventilated room or outdoors. A CO_2 fire extinguisher must be positioned adjacent to the area where cleaning and stenciling procedures are performed.

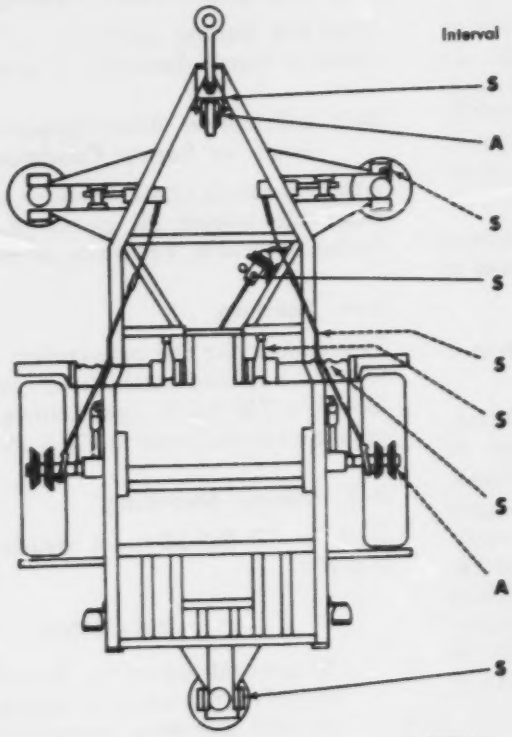
LUBRICATION CHART

TRAILER, CHASSIS: 1-TON, 2-WHEEL, M514, XM545

General Notes:

Intervals are based on normal operation. Reduce to compensate for abnormal operation and severe conditions or contaminated lubricants. During inactive periods, intervals may be extended commensurate with adequate preservation. Relubricate after washing or fording.

Clean fittings before lubricating. Clean parts with THINNER, paint, mineral spirits (TPM) or SOLVENT, dry cleaning (SD). Dry before lubricating. Lubricate dotted arrow points on both sides of the equipment.



Interval	• Lubricant	
S	GAA	Front Support Swivel Caster
A	GAA	Wheel Bearings (Remove, clean, dry and repack)
S	GAA	Leveling Jack Gear Box
S	HB	Brake Master Cylinder (Fill to ½ inch from top)
S	GAA	Hand Brake Cable
S	OE	Torsion Spring Support Turnbuckle Pins
S	GAA	Suspension Supports (4 fittings each side)
A	GAA	Wheel Bearings (Remove, clean, dry and repack)
S	GAA	Leveling Jack Gearbox

— KEY —

LUBRICANTS	EXPECTED TEMPERATURES			FOR ARCTIC OPERATION Refer to TM 9-207	INTERVALS
	Above +32° F	+40° F to −10° F	0° F to −65° F		S-Semiannually
OE—Lubricating oil, general purpose	OE (Mod)	OE	OES		A - Annually (12 Months, Every 2nd "S" P.M. Service
GAA—Grease, automotive and artillery	GAA	GAA	GAA		
HB—Fluid, hydraulic brake	HB	HB	HBA		

— NOTES —

1. OIL CAN POINTS—Quarterly, lubricate hand brake assembly and linkage, brake cable turnbuckles, receptacle cover hinge, traveling lock pins and tool box locks and hinges.

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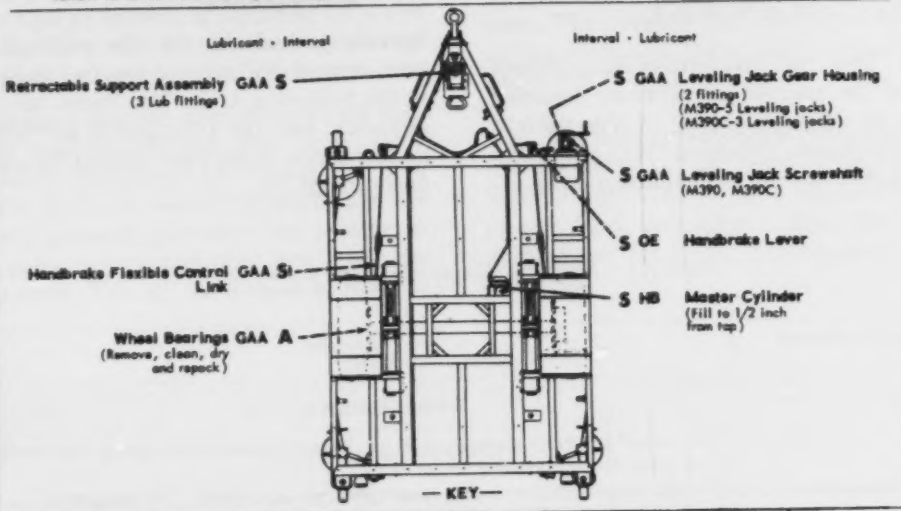
Figure 3–1. Lubrication chart (M514 and XM545).

LUBRICATION CHART

CHASSIS, TRAILER: 2-TON, 2-WHEEL, M390 AND M390C

Intervals are based on normal operation. Reduce to compensate for abnormal operation and severe conditions or contaminated lubricants. During inactive periods, intervals may be extended commensurate with adequate preservation. Relubricate after washing or fording.

Clean fittings before lubricating. Clean parts with THINNER, paint, volatile mineral spirits (TPM) or SOLVENT dry cleaning (SD). Dry before lubricating. Lubricate dotted arrow points on both sides of the equipment.



LUBRICANTS	EXPECTED TEMPERATURE		
	above +32°F	+40°F to -10°F	0°F to -65°F
OE - LUBRICATING OIL, INTERNAL COMBUSTION ENGINE	OE	OE	OES
HB - FLUID HYDRAULIC BRAKE NON-PETROLEUM BASE	HB	HB	HBA
GAA - GREASE AUTOMOTIVE AND ARTILLERY	GAA	GAA	GAA

FOR ARCTIC OPERATION Refer to TM 9-207

LUBRICANTS	INTERVALS
HBA - HYDRAULIC BRAKE FLUID NON-PETROLEUM BASE (ARCTIC)	S—Semi annually
OES - LUBRICATING OIL, INTERNAL COMBUSTION ENGINE (SUB-ZERO)	A—Annually

— NOTES —

1. **DO NOT LUBRICATE**
   Springs.
2. **OIL CAN POINTS**
   Quarterly lubricate handbrake linkage; leveling jack staybars, foot pad pins, inner tubes; retractable support inner tube, spring loaded handle, wheel assembly, hinges and brackets.
3. **LUBRICATED AT TIME OF DISASSEMBLY BY ORDNANCE PERSONNEL**
   Retractable support and leveling jack gear housings, clean, dry and repack with lubricant GAA.
4. **HB/HBA**
   Use hydraulic brake fluid non-petroleum base only.

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Figure 3–2. Lubrication chart (M390 and M390C).

Section III. PREVENTIVE MAINTENANCE SERVICES

3–8. Semi-Annual "S" Preventive-Maintenance Services

a. Intervals. The semi-annual "S" service is performed by organizational mechanics every 6 months insofar as practicable in accordance with the procedures outlined in table 3–1.

b. Purpose. The "S" preventive-maintenance service insures the correct adjustment, securing and assembly of all components of the vehicle. Necessary replacements, cleaning, lubrication, and protection of parts and/or assemblies will be accomplished, as required, to give reasonable assurance of trouble-free operation until the next semi-annual "S" service is performed.

3–9. Specific Procedures for Organizational Maintenance

Specific procedures for the performance of the semi-annual "S" service for the trailers are given in the following table. The items fall in numerical sequence, and are arranged to provide for ease of maintenance. Each item should be serviced in the order given.

Table 3–1. Preventive Maintenance Checks and Services

Organizational — Semi-Annually

Sequence number	Item to be inspected	Procedures	Paragraph reference
		BEFORE ROAD TEST	
1	Tires	Gage tires for correct pressure of 50 psi. Remove penetrating objects such as nails or glass. Replace missing valve caps.	1–11
2	Trailer equipment	Visually inspect trailer towing connections, tools, and mounted equipment	2–12
3	Leaks	Look under trailer for any indication of oil or brake fluid leaks.	2–11
4	Swivel caster with hub assembly or retractable support assembly.	With trailer connected to towing vehicle, lower and raise swivel caster with hub assembly or retractable support to insure correct operations.	2–14
5	Leveling jacks	Lower and raise leveling jacks to insure correc operation	2–5
6	Lights	Operate taillight stoplight and blackout stoplight. Replace burned out lamps.	2–6
7	Hand brakes	Apply trailer hand brakes and make sure they hold trailer securely. Adjust if necessary.	
		DURING ROAD TEST	
8	Unusual noises	At all times, during road test, be alert for unusual or excessive noises that may indicate damage, looseness, defects, or deficient lubrication in trailer attachments and wheels.	
9	Service brake system	Make several stops noting side pull, noise, chatter, or any other unusual condition. Apply trailer service brakes alone and observe if they operate effectively. Adjust if necessary.	2–7
		AFTER ROAD TEST	
10	Brake drum and wheel hub temperature.	Immediately after road test, cautiously feel brake drums and wheel hubs. An overheated brake drum and wheel hub indicates an improperly adjusted, defective, or dry wheel bearing or a dragging brake. An abnormally cool condition indicates an inoperative brake.	
11	Leaks	Make general observation under trailer for oil or brake fluid leaks.	
12	Suspension system	Check torsion bar type springs and shock absorbers or spring and radius rods to see if they have been damaged. Tighten all assemblies, mounting bolts, and spring U-bolts.	
13	Wheel bearings	Wheel bearings will be disassembled, cleaned, and repacked during every second semi-annual inspection. If necessary, remove wheels and hubs and inspect brake internal components. Clean backing plate and tighten plate mounting bolts. Adjust brakes and torque wheel stud nuts to 450 to 500 pounds-feet.	
14	Frame	Make general observation of frame, tool boxes, deck plates, step ladder, folding steps, and lunette for tightness of mounting bolts.	
15	Lubrication	Lubricate trailer in accordance with applicable lubrication chart. Coordinate with inspection and disassembly operations to avoid duplication. During lubrication inspect tires for unusual wear, penetrating objects, and proper matching. Rotate and match tires according to tread design and degree of wear.	
16	Final road test	Perform final road test giving special attention to repaired and adjusted items.	

Section IV. TROUBLESHOOTING

3–10. Scope

a. This section contains troubleshooting information and tests for locating and correcting some of the troubles which may develop in the vehicle. Each symptom of trouble or malfunction given for an individual unit or system is followed by a list of probable causes of the trouble and corrective actions necessary to remedy the malfunction.

b. This technical manual cannot cover all possible troubles and deficiencies that may occur under the many conditions of operation. If a specific trouble, test, and remedy therefor are not covered herein, proceed to isolate the system in which the trouble occurs and then locate the defective component. Use all the senses to observe and to locate troubles. Use any test instruments such as an ohmmeter, voltmeter, ammeter, or test lamp that are available. Standard automotive theories and principles of operation apply in troubleshooting the materiel. Question the operator to obtain maximum number of observed symptoms. The greater the number of symptoms that can be evaluated, the easier will be the isolation of the defect.

c. The tests and remedies provided in table 3–2 are governed by the scope of the organizational level of maintenance. The malfunctions, probable causes, and corrective action that can be performed by the using organization are listed in table 3–2.

Table 3–2. Troubleshooting

Malfunction	Probable cause	Corrective action
	ELECTRICAL SYSTEM	
1. All lamps will not light	*a.* Intervehicular cable not properly plugged into towing vehicle receptacle.	*a.* Pull out plug and reinsert fully.
	b. Light switch on towing vehicle not adjusted properly.	*b.* Check setting of light switch in the towing vehicle.
	c. No current from towing vehicle	*c.* Check circuit breaker and wiring on towing vehicle.
	d. Short circuit in wiring harness	*d.* Check wiring harness for bare spots or other defects in insulation.
	e. Dirty or corroded contacts in receptacle or on intervehicular cable plug.	*e.* Clean contacts.
	f. Loose connection or broken wires	*f.* Tighten loose connection. Replace defective wiring harness (para 3–12 or 3–13).
2. One or more lamps (but not all) will not light.	*a.* Burned out lamp	*a.* Replace lamp (para 3–11).
	b. Wiring harness and taillight cable connectors improperly connected.	*b.* Disassemble and assemble connectors properly.
	c. Broken or shorted wiring	*c.* Check wiring harness and taillight cables for breaks and bare spots or other defects in insulation. Replace defective wiring harness (para 3–12 or 3–13) or replace defective taillight stoplight assembly (3–11).
	d. Dirty or corroded contacts in receptacle or on intervehicular cable plug.	*d.* Clean contacts.
	e. Dirty or corroded lamp sockets	*e.* Remove lamp and clean socket.
	f. Damaged taillight stoplight assembly	*f.* Replace taillight stoplight assembly (para 3–11).
3. Dim or flickering lights	*a.* Loose, dirty, or corroded terminals	*a.* Clean and tighten terminals. Refer to TM 9–1825E.
	b. Intervehicular cable improperly grounded	*b.* Remove screw and washer securing cable ground wire to connector clip assembly. Clean and tighten cable terminal and clean surface of clip assembly. Position cable terminal on clip and secure with screw and washer.
	c. Taillight stoplight assembly improperly grounded.	*c.* Remove two screws and washers securing taillight stoplight assembly to mounting bracket. Clean screws and mounting bracket. Position taillight stoplight on bracket and install two screws and washers. Tighten screws securely.

Table 3-2. Troubleshooting—Continued

Malfunction	Probable cause	Corrective action
	ELECTRICAL SYSTEM—Continued	
	d. Defective lamp	*d.* Replace lamp (para 3-11).
	e. Dirty or corroded lamp sockets or contacts in receptacle or on plug.	*e.* Remove lamp (para 3-11) and clean sockets or contacts.
	SERVICE BRAKE SYSTEM	
4. Brakes will not release	*a.* Intervehicular hose improperly connected to towing vehicle.	*a.* Connect hose properly.
	b. Brake valve on towing vehicle in applied position.	*b.* Move brake valve to released position.
	c. Restriction in air service line or intervehicular hose.	*c.* Check all tubes and hose. Refer to TM 9-1827A.
	d. Shutoff valve closed on towing vehicle	*d.* Open valve.
	e. Weak or broken brakeshoe return spring	*e.* Replace springs (para 3-20 or 3-22).
5. No brakes, or weak brakes	*a.* Shutoff valve closed on towing vehicle	*a.* Open valve.
	b. Intervehicular hose improperly connected to towing vehicle.	*b.* Connect hose properly.
	c. Low air pressure	*c.* Check air pressure gage on towing vehicle. Make leakage test (para 3-17). Check for restriction of air.
	d. Excessive travel of air chamber push rod	*d.* Check operation and adjust (para 3-17).
	e. Clogged air filter	*e.* Clean or replace element (para 3-24).
	f. Air in hydraulic system	*f.* Bleed brake hydraulic system.
	g. Leak in hydraulic system	*g.* Locate leak (para 3-17). Tighten or replace hydraulic tubes.
	h. Grease on brake lining	*h.* Replace brake shoe (para 3-20 or 3-22) and check and replace oil seal if necessary.
	i. Worn brake lining	*i.* Adjust brakes (para 3-18 or 3-19).
	j. Worn out brake lining	*j.* Replace brake shoes (para 3-20 ar 3-22).
6. Slow application or slow release of brakes.	*a.* Low air pressure	*a.* Check air pressure gage on towing vehicle. Make leak-test (para 3-17). Check for restriction of air.
	b. Clogged air filter	*b.* Clean or replace element (para 3-24).
	c. Air in hydraulic system	*c.* Bleed brake hydraulic system.
	d. Weak or broken brakeshoe return spring	*d.* Replace spring (para 3-20 or 3-22).
7. Brakes grab	*a.* Brakes out of adjustment	*a.* Adjust brakes (para 3-18 or 3-19).
	b. Grease on brake lining	*b.* Replace brakeshoe (para 3-20 or 3-22) and check and replace oil seal if necessary.
	c. Loose or worn wheel bearings	*c.* Adjust bearings (para 3-32 or 3-35). If they cannot be adjusted properly, replace bearings (para 3-32 or 3-35).
	d. Cracked, scored, or deformed brakedrum	*d.* Replace brakedrum (para 3-20 or 3-22).
	e. Worn or loose brake lining	*e.* Replace brake shoes (para 3-20 or 3-22).
	f. Moisture in air filter	*f.* Drain filter (para 3-24).
8. Brakes drag (one or both b akes running hot).	*a.* Brakes out of adjustment (too tight)	*a.* Adjust brakes (para 3-18 or 3-19).
	b. Weak or broken brakeshoe return spring	*b.* Replace spring (para 3-20 or 3-22).
	c. Hand brakes not fully released	*c.* Adjust hand brake lever and linkage (para 3-15 or 3-16).
	d. Brake drum out-of-round	*d.* Replace brakedrum (para 3-20 or 3-22).
	HAND BRAKE SYSTEM	
9. Hand brakes will not hold vehicle.	*a.* Brakes out of adjustment	*a.* Adjust hand brake lever (para 3-15).
	b. Hand brake linkage out of adjustment	*b.* Adjust linkage (para 3-16).
	SUSPENSION SYSTEM	
10. Trailer pulls to one side	*a.* Improper wheel bearing adjustment	*a.* Adjust wheel bearing (para 3-32 or 3-35).
	b. Bent suspension arm (M514 and XM545)	*b.* Replace suspension arm (para 3-33).
	c. Bent axle assembly (M390 and M390C)	*c.* Replace axle assembly (para 3-36).
11. Improper spring action	*a.* Loose suspension mounting (M 14 and XM545).	*a.* Tighten suspension mounting (para 3-33).
	b. Insufficient lubrication (M514 and XM545)	*b.* Lubricate suspension (fig. 3-1).
	c. Loose U-bolts	*c.* Tighten U-bolt nuts.
	d. Broken spring leaves	*d.* Replace spring (para 3-37).
	e. Broken spring center bolt or clips	*e.* Replace spring (para 3-37).

Table 3–2. Troubleshooting—Continued

Malfunction	Probable cause	Corrective action
	SUSPENSION SYSTEM—Continued	
12. Excessively worn, scuffed, or cupped tires.	*a.* Improper tire pressure	*a.* Inflate tires to correct pressure (pa a 1–11).
	b. Loose wheels	*b.* Tighten wheel stud nuts (para 3–29).
	c. Improper wheel bearing adjustment	*c.* Adjust wheel bearings (para 3–32 or 3–35).
	d. Bent rim or wheel	*d.* Replace wheel (para 3–29)
	e. Bent suspension arm (M514 and XM545)	*e.* Replace suspension arm (para 3–33).
	f. Bent axle assembly (M390 and M390C)	*f.* Replace axle assembly (para 3–36).
	SWIVEL CASTER WITH HUB ASSEMBLY (M514 AND XM545)	
13. Caster does not move easily.	*a.* Insufficient lubrication	*a.* Lubricate caster (fig. 3–1).
	RETRACTABLE SUPPORT ASSEMBLY (M390 AND M390C)	
14. Support crank will not turn or will not turn freely.	*a.* Insufficient lubrication	*a.* Lubricate retractable support assembly (fig. 3–2).
	b. Worn or damaged gears, bearings, screw shaft, outer tube assembly, or inner tube assembly.	*b.* Replace retractable support assembly.
15. Support will not swivel or turn freely in lunette mounting bracket (for steering).	*a.* Insufficient lubrication	*a.* Lubricate spindle assembly (fig. 3–2).
	b. Bracket and spindle assembly bent	*b.* Replace retractable support assembly.
	LEVELING JACKS	
16. Jack crank will not turn or will not turn freely.	*a.* Insufficient lubrication	*a.* Lubricate leveling jack (fig. 3–1 or 3–2).
	b. Worn or damaged gears, bearing, screw shaft, outer tube assembly, or inner tube assembly.	*b.* Replace leveling jack.

Section V. ELECTRICAL SYSTEM

3–11. Light Assemblies
(figs. C–1 and C–2)

a. Disassembly.

(1) Remove door and gasket.

(2) Remove lamp from socket.

(3) Disconnect light wiring from wiring harness.

(4) Remove hardware securing light to mounting bracket and remove light.

b. Assembly. Assemble lights by reversing procedure in *a* above.

3–12. Intervehicular Cable (M514 and XM545)
(fig. 3–4)

a. Removal.

(1) Remove screws and washers securing cover for intervehicular cable and wiring harness connections to inside of A frame and remove cover.

(2) Disconnect ground wire from frame.

(3) Disconnect intervehicular cable from wiring harness.

b. Installation (M514 and XM545). Install cable by reversing procedure in *a* above.

3–13. Intervehicular Cable (M390 and M390C)
(fig. 3–5)

a. Removal.

(1) Remove screw and washer securing cable clamp and tension spring to drawbar.

(2) Remove plug assembly from stowage clip assembly.

(3) Disconnect ground wire from connector clip assembly.

(4) Disconnect intervehicular cable from wiring harness.

b. Installation (M390 and M390C). Install intervehicular cable by reversing procedure in *a* above.

3–14. Wiring Harness
(figs. 3–4 and 3–5)

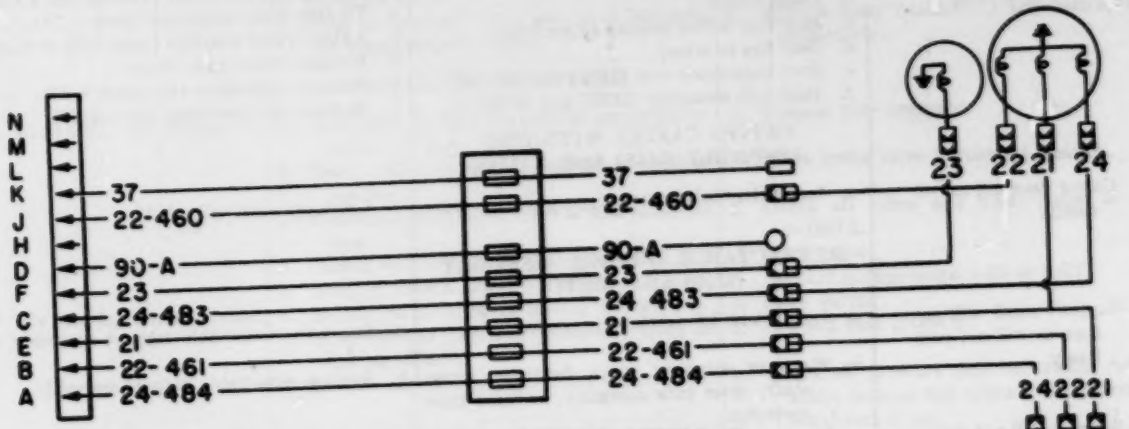
a. Removal.

(1) Disconnect wiring harness from intervehicular cable.

(2) Disconnect lights from wiring harness.

(3) Remove clamps securing wiring harness to frame and remove harness.

b. Installation. Install wiring harness by reversing procedure in *a* above.



CIRCUIT NO.	CABLE GAUGE	CIRCUIT DESCRIPTION
21	14	SERVICE TAIL LIGHT
22-460	14	SERVICE TAIL LIGHT
22-461	14	SERVICE STOPLIGHT
23	14	BLACKOUT STOPLIGHT
24-483	14	SERVICE STOPLIGHT
24-484	14	SERVICE TAILLIGHT
37	14	OPEN (CAPPED)
90-A	14	GROUND

Figure 3–3. Wiring diagram (all models).

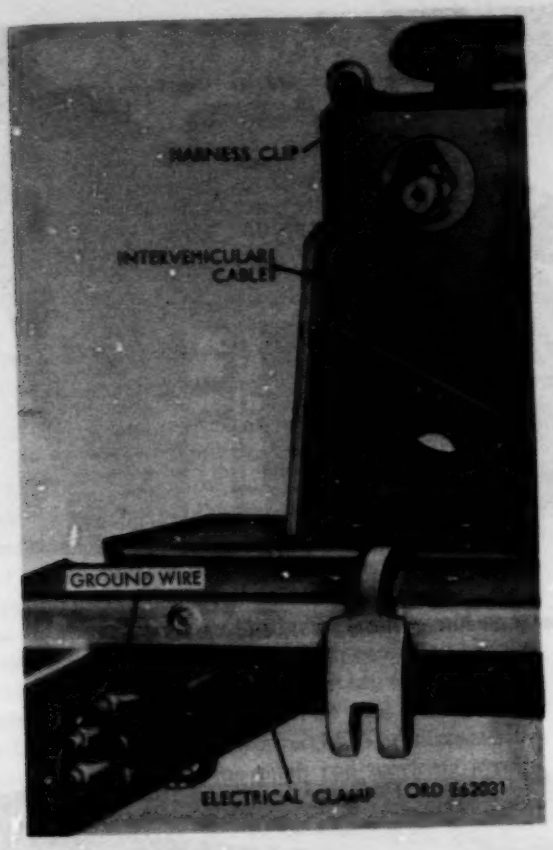


Figure 3–4. Intervehicular cable connections (M514 and XM545).

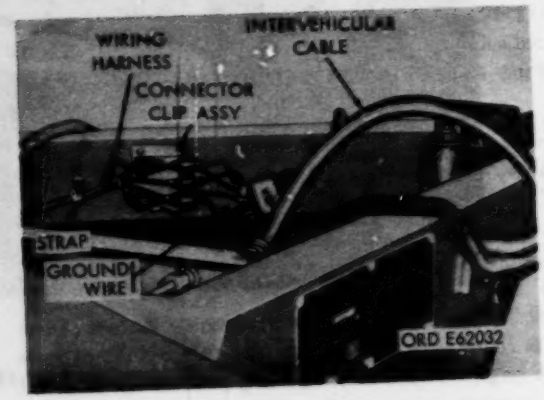


Figure 3–5. Intervehicular cable connections (M390 and M390C).

Section VI. HAND BRAKE SYSTEM

3–15. Hand Brake Lever Adjustment (fig. 3–7)

Turn the adjusting knob on the end of the hand brake level clockwise to increase braking action and counterclockwise to decrease braking action.

NOTE

If hand brakes cannot be properly adjusted with the hand brake lever adjusting knob, adjust the cable (para 3–16).

3–16. Hand Brake Cable Adjustment

a. Turn the spring-loaded adjusting knob (figs. 3–6 and 3–7) on the end of the hand brake lever counterclockwise until the link pin which rides in the slots in the lever is almost touching the end of the slots (toward the knob). Make sure that the lever is in the fully released position.

b. Jack up the side of the trailer with the hand brake linkage being adjusted so that the wheel is off the ground.

c. Loosen the plain hex nut at each end of the turnbuckle and turn the turnbuckle counterclockwise (when viewed from the rear of the trailer) until the brake shoes drag slightly when the wheel and brakedrum are rotated by hand.

d. Back off (turn clockwise) the turnbuckle until the wheel and drum turn freely without drag.

e. Test the adjustment by moving the hand brake lever to the vertical (applied) position. If the lever cannot be moved to the fully applied position, turn the turnbuckle clockwise until correct lever action is obtained.

f. Tighten the plain hex nuts against the turnbuckle.

g. Remove the jacks from under the trailer.

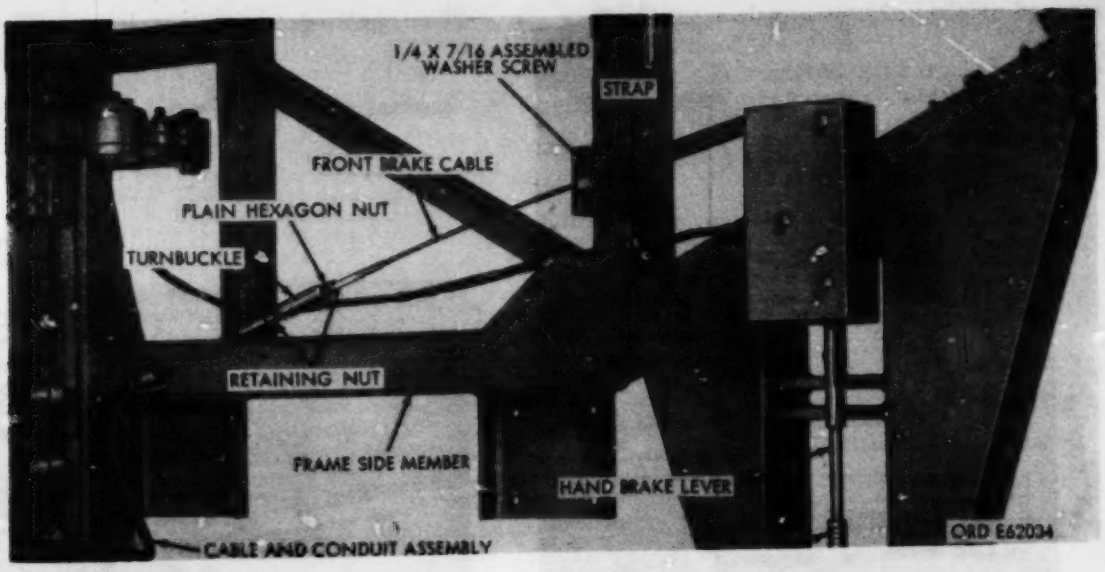


Figure 3–6. Hand brake lever and cable conduit assembly (M514 and XM545).

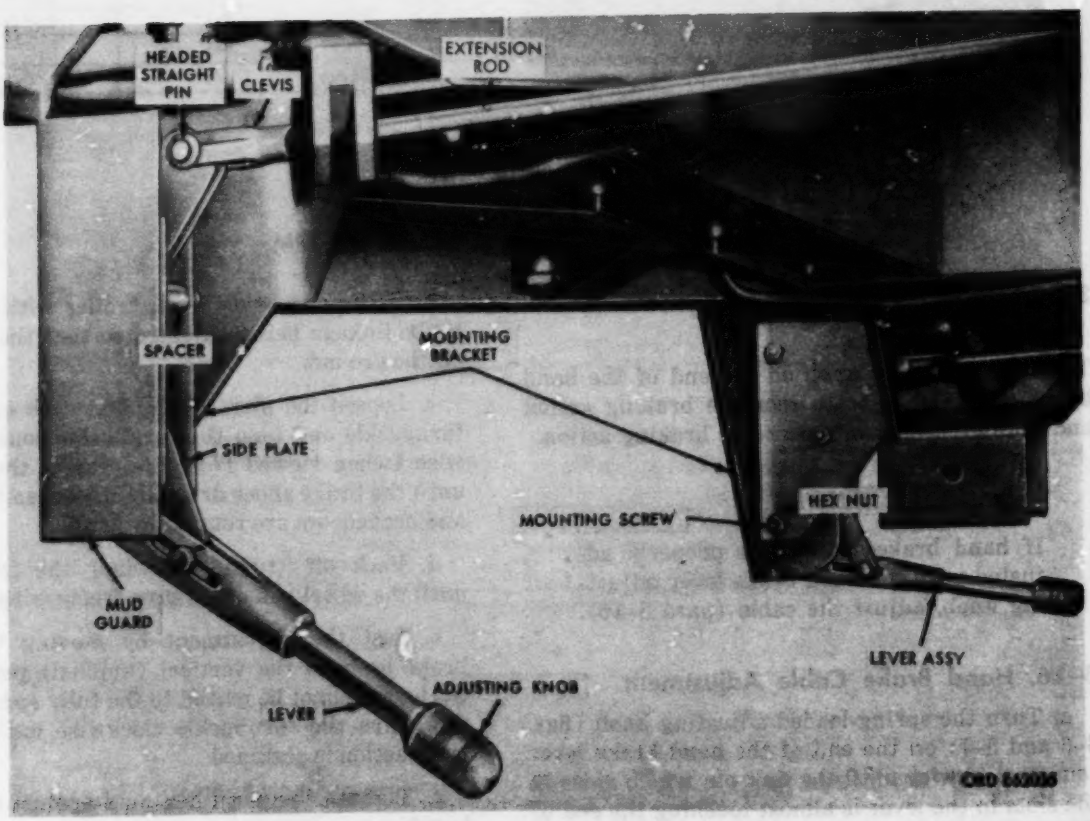


Figure 3–7. Hand brake lever (M390 and M390C).

3–17. Brake System Tests

a. Air System Lines and Hose Leakage Test. Leakage at components or connections of the compressed air system can be detected by the soapsuds method. With the compressed air system fully charged, coat exterior of components and connections with soapy water. Formation of bubbles at joints or connections indicates leakage of air. If the leakage cannot be eliminated by tightening nuts and bolts or connections, replace the defective components.

b. Air Chamber Push Rod Travel Test. With the brakes released, insert a small testing rod in one of the two inspection holes (fig. 3–8) in the air chamber mounting bracket which are alined with similar holes in the air chamber. Mark the testing rod at the surface of the bracket when the rod is inserted as far as it will go (i.e., is in contact with the air chamber rod). Apply the brakes and again mark the testing rod at the surface of the bracket with the testing rod still in contact with the push rod. Withdraw the testing rod and measure the distance between the two marks. The distance between the marks is the push rod working stroke, which should be between ½- and ⅞-inch. If the push rod working stroke is greater or less than normal, adjust the brakes.

3–18. Brake Shoe Adjustment (M514 and XM545)

a. Minor Adjustment.

(1) Lower leveling jacks until both wheels are off the ground.

(2) Release the trailer hand brakes.

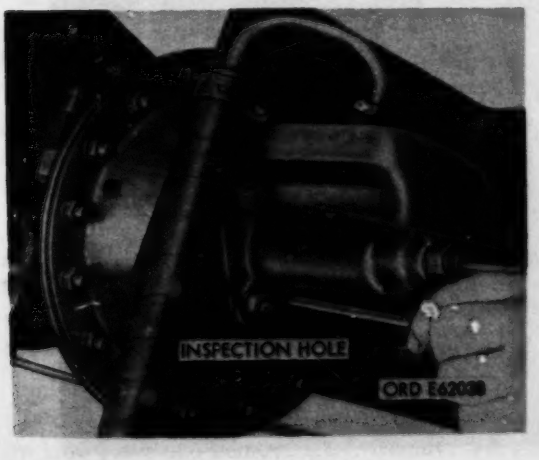


Figure 3–8. Testing air chamber push rod travel.

(3) On left brake assembly, turn front brake shoe adjusting cam clockwise until wheel locks. Back off cam (counterclockwise) until a slight drag is felt while turning wheel. Turn rear brake shoe adjusting cam counterclockwise until wheel locks. Back off came (clockwise) until a slight drag is felt while turning wheel. Adjust right brake shoe in the same way, except that front shoe adjusting cam is turned counterclockwise to tighten and rear shoe adjusting cam is turned clockwise to tighten brake shoe.

b. Major Adjustment.

(1) Lower leveling jacks until both wheels are off the ground.

(2) Release the trailer hand brakes.

(3) Working on the left brake assembly, loosen nuts on two brake shoe anchor pins (fig. 3–9). Install wrench in socket inside end of front shoe anchor pin and turn pin clockwise until wheel locks. Back anchor pin off until only a slight drag is felt while rotating the wheel and tighten nut to secure pin. Turn rear shoe anchor pin counterclockwise until wheel locks, back off anchor pin until only a slight drag is felt while rotating wheel, and tighten nut to secure pin.

(4) Adjust the two brake shoe adjusting cams as directed in minor adjustment (*a* above). The major adjustment of the right brake assembly is made in the same way except that front shoe anchor pin is turned counterclockwise to tighten and rear shoe anchor pin is turned clockwise.

3–19. Brake Shoe and Adjustment (M390 and M390C)

(fig. 3–10)

NOTE

Only one procedure is required for adjusting the brakes on the M390 and M390C.

a. Lower leveling jacks until both wheels are off the ground.

b. Turn the lower adjusting stud on the back side of the left brake assembly clockwise until the rear brake shoe drags slightly when the wheel and barkedrum are rotated by hand.

c. Turn the adjusting stud counterclockwise just enough to allow the wheel and drum to turn freely without drag.

d. Repeat steps (3) and (4) above at the upper adjusting stud on the backside of the left brake assembly to adjust the front brake shoe.

e. Adjust right brake shoes in the same way except that the adjusting stud is turned counterclockwise to tighten the brake shoe.

3–20. Disassemble Brake Assembly (M514 and XM545)

(figs. C–11 and C–12)

NOTE

Disassemble brake system only to the point necessary to replace or repair worn or damaged items.

a. Remove wheel.

b. Remove hub and brake drum.

c. Release the hand brake lever on side with wheel removed, but do not release the hand brake for the opposite wheel.

d. Position a clamp over the ends of the wheel cylinder assembly to retain cups and pistons in the cylinder and remove brake shoe return spring(s).

e. Remove two hex nuts, lock washers, and anchor pin washers securing anchor pins to dust shield and remove pins, anchor plate, and anchor pin bushings.

f. Remove two C washers and guide pin washers securing each brake shoe to adjusting cam pin on dust shield and remove brake shoes. Remove two shoe guide pin washers from pins on dust shield.

g. Remove cotter pin and headed straight pin connecting clevis of hand brake cable and conduit assembly to link and slide assembly (fig. C–11) at rear of dust shield.

h. Remove cotter pin, guard spring, and brake lever guard from link and slide assembly. Pull slide assembly towards rear until free of front slide guide then pull outward and forward out of rear slide guide.

i. Place a suitable container under the hose assembly at rear of dust shield, disconnect hose from fitting and allow the brake fluid in hose and wheel cylinder assembly to drain into the container. Remove brake cylinder bolt flat washer, fluid pressure line multiple fitting and gasket from wheel cylinder at rear of dust shield.

j. Remove hex head bolts and lock washers securing wheel cylinder to backing plate and remove wheel cylinder.

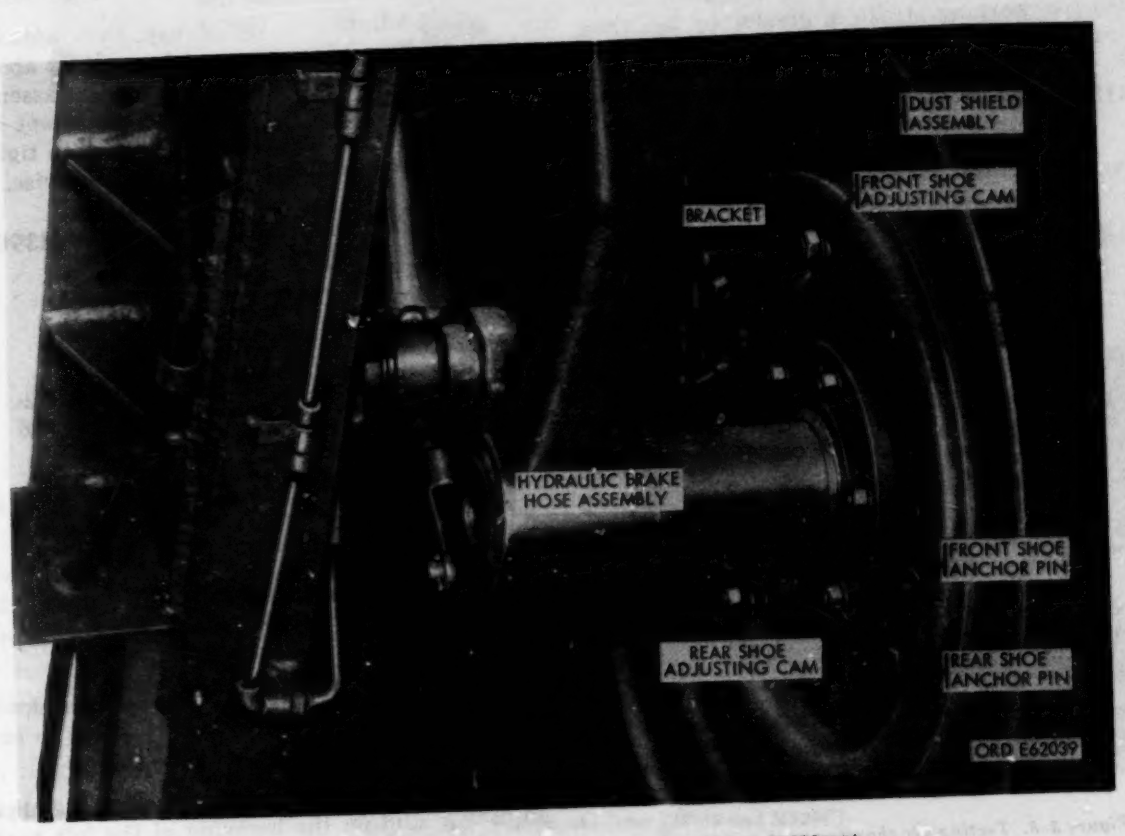


Figure 3–9. Brake shoe adjusting points (M514 and XM545).

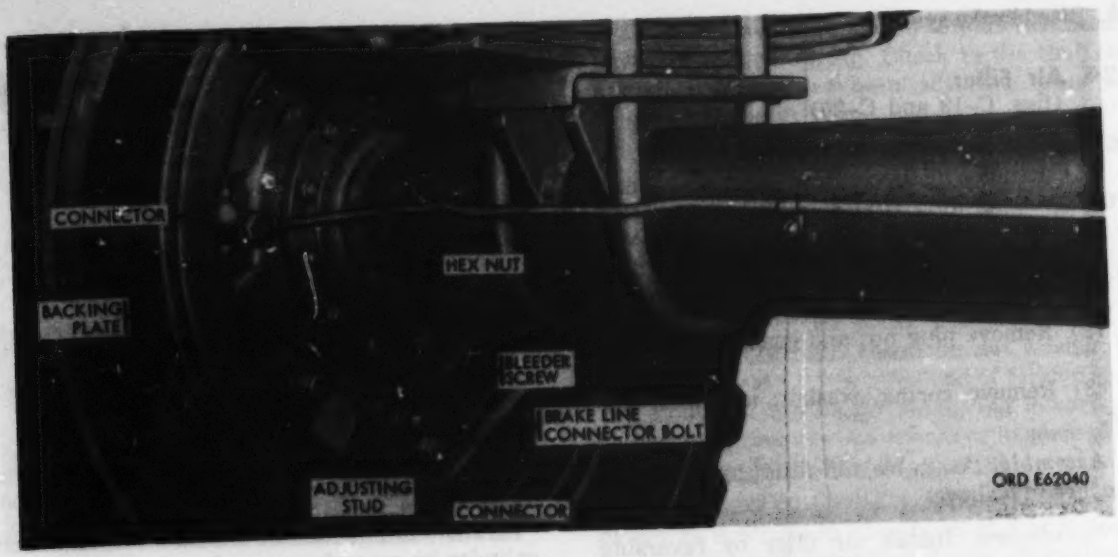


Figure 3–10. Brake shoe adjusting stud (M390 and M390C).

3–21. Assemble Brake Assembly (M514 and XM545)

a. Assemble brake system by reversing procedure in paragraph 3–20.

b. Bleed brake system.

3–22. Disassemble Brake Assembly (M390 and M390C)
(fig. C–12)

a. Remove the wheel.

b. Remove the hub and brakedrum (para 3–35).

c. Release the hand brake lever on the side with the wheel removed but do not release the hand brake for the opposite wheel.

d. Remove cotter pin and headed straight pin securing clevis on front end of extension rod to hand brake lever.

e. Position a clamp over the ends of each wheel cylinder assembly to retain cups and pistons in each cylinder. Remove both return springs, using brake spring pliers.

f. Remove the two slotted washers, flat washers, and spring washers from the pins on the upper ends of both brake shoe and lining assemblies, and remove the hand brake lever and link from the pins.

g. Remove the hex nut, lock washer, flat washer, and sleeve securing the front brake shoe to the backing plate and remove shoe. Remove the guide screw, lock washer, flat washer, and sleeve securing the rear brake shoe to the backing plate and remove shoe.

h. Place a suitable container under the connector at the back side of the lower wheel cylinder and unscrew the fitting on the end of the hydraulic tube assembly from the connector. Allow the hydraulic brake fluid in the tubes and wheel cylinders to drain into the container.

i. Remove the brake line connector bolt and gasket securing the connector to the lower wheel cylinder. Pull the connector away from the cylinder and remove the connector-to-cylinder gasket.

j. Remove two hex-head bolts and lock washers securing the lower wheel cylinder to the backing plate and remove the cylinder and spark shield from the front side of backing plate.

k. Remove spark shield from cylinder.

l. Remove the brake line connector bolt and gasket securing the tube connector to the upper wheel cylinder. Pull the connector away from the cylinder and remove the connector-to-cylinder gasket.

m. Remove two hex-head bolts and lock washers securing the upper wheel cylinder to the backing plate. Remove the cylinder and spark shield from the front side of the backing plate.

3–23. Assemble Brake Assembly (M390 and M390C)

a. Assemble brake system by reversing procedure in paragraph 3–22.

b. Bleed brake system.

3–24. Air Filter
(figs. C–19 and C–20)

a. Removal.

(1) Remove fittings from inlet and outlet ports.

(2) Remove U-bolt and remove air filter.

b. Disassembly.

(1) Remove pipe plug from the plug nut.

(2) Remove plug nut and gasket from housing.

(3) Remove spring, washer, and filter element.

c. Assembly. Assemble air filter by reversing procedure in *b* above.

d. Installation. Install air filter by reversing procedure in *a* above.

3–25. Air Chamber and Master Cylinder

a. Removal.

(1) Drain hydraulic fluid from master cylinder.

(2) Remove the elbow from the inlet port of the air chamber.

(3) Remove nuts and lock washers clamping the air chamber and master cylinder to the mounting bracket and slide the master cylinder off the air chamber mounting studs and away from the mounting bracket and remove collar from air chamber.

(4) Remove the air chamber from the front side of the mounting bracket and remove collar from air chamber.

(5) Remove the vent hose and vent tube from the master cylinder.

b. Disassembly of Air Chamber (fig. C–21).

(1) Remove nuts, lock washers, and cap screws securing body, diaphragm, and cover.

(2) Separate body, diaphragm, and cover and remove spring, spring retainer, and rod.

(3) Remove O ring securing retainer to rod and remove retainer.

c. Assembly of Air Chamber. Assemble air chamber by reversing procedure in *b* above.

d. Assembly of Master Cylinder (fig. C–18).

(1) Remove plug assembly from cylinder and remove gasket from plug.

(2) Remove boot from rear of cylinder.

e. Assembly of Master Cylinder. Assemble master cylinder by reversing procedure in *d* above.

f. Installation. Install air chamber and master cylinder by reversing procedure in *a* above.

3–26. Wheel Cylinder (M514 and XM545)
(fig. C–17)

a. Removal.

(1) Remove bolt securing multiple fluid pressure line fitting to cylinder. Remove flat washer, fitting and inner gasket.

(2) Remove bleeder valve.

b. Installation. Install wheel cylinder by reversing procedure in *a* above.

3–27. Wheel Cylinder (M390 and M390C)
(fig. C–16)

a. Removal. Remove bleeder valve from cylinder.

b. Installation. Assemble wheel cylinder by reversing procedure in *a* above.

Section VIII. SUSPENSION SYSTEM (M514, XM545)

3–28. Torsion Spring Adjustment

a. Adjustments. Minor adjustments, to compensate for slight variations in strength of different torsion springs, can be made by the clevis adjusting screw (fig. 3–11). Major or initial adjustment of relative position of the suspension arm assembly, to give correct vehicle height, can be made by changing relative positions of the support and sleeve on the splines of the torsion spring.

b. Minor Adjustment of Torsion Spring (fig. 3–11). With trailer loaded and level, measure distance from top of frame to ground. This distance should be 22 inches. If height is not correct, loosen hex-head cap screws on rod clevises, and turn clevis adjusting screw. To raise trailer frame, shorten adjusting screw. To lower trailer frame, lengthen adjusting screw. When correct trailer height is obtained tighten hex-head cap screws. If correct trailer height cannot be obtained by adjusting screw, turn adjusting screw until distance between clevis pin centers is at nominal length of 8¾-inches as shown in figure 3–11 and make major adjustment of torsion spring (*c* below).

c. Major Adjustment of Torsion Spring.

NOTE

The key numbers shown below in paren-

Figure 3–11. Minor adjustment of torsion spring.

theses refer to figure C–23 under otherwise indicated.

(1) With trailer loaded and level, measure distance from top of frame to ground and record amount by which this distance varies above or below the required 22 inches. Disconnect shock absorber and bumper stop from suspension arm assembly (fig. 3–12). Jack up frame until wheel is about to leave ground and torsion has been relieved in torsion spring. Check to see that clevis adjusting screw has been adjusted to nominal length (*b* above).

(2) Remove cover and cover gasket from support on frame. Remove cotter pin (15), and centering nut washer (10) from plain stud (11) in outer end of torsion spring (9). Using brass drift, drive on outer end of torsion spring until expansion plug (14) is driven out of torsion spring support (8). Remove cotter pin (15), nut (13), lock washer (12), and centering nut washer (10) from plain stud (11) in inner end of torsion spring (9). Continue driving torsion spring inward until splines on spring are out of splines in spring cover (24) and torsion spring support (8).

(3) Refer to amount vehicle frame was high or low as recorded in (1) above. If frame was recorded low, carefully jack up frame approximately the amount it was low until splines in torsion spring cover (24) and torsion spring support (8) are again alined and push torsion spring (9) outward until centered in splines of sleeve and support. If frame was recorded high, carefully lower frame approximately the amount it was high until splines in spring cover and torsion spring support are again alined and push torsion spring outward until centered in splines of cover and support.

(4) Lower jack until all weight of vehicle is

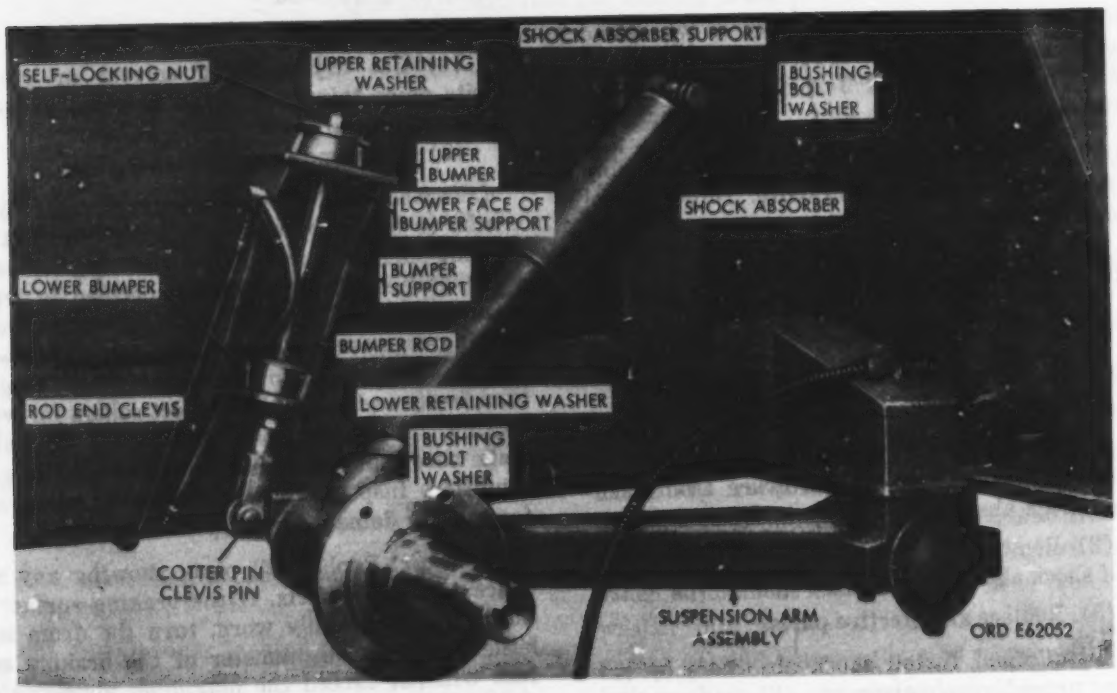


Figure 3–12. Suspension arm assembly and associated parts.

again on wheels and measure distance from top of frame to ground. If this distance is near enough to 22 inches so that a minor adjustment of torsion spring cover (24) and torsion spring support (8) make this minor adjustment as directed. If this distance is not near enough to 22 inches so that a minor adjustment of torsion spring will correct the adjustment, again change adjustment of spring cover (24) and torsion spring support (8) (3 above). Repeat procedures until proper adjustment is obtained.

(5) Install centering washer (10), lock washer (12), and nut (12) on plain stud (11) in inner end of torsion spring (9) and secure with cotter pin (15). Install new expansion plug (14) in torsion spring support (8). Install centering washer (10), lock washer (12), and nut (13) on plain stud (11) in outer end of torsion spring (9) and secure with cotter pin (15). Position cover gasket (30) and cover (31) on bracket on frame, and secure with two lock washers (32) and bolt (33). Connect shock absorber (para 3–30) and bumper stop (para 3–31) to suspension arm.

3–29. Wheels and Tires

a. Removal.

(1) Apply hand brake.

(2) Loosen six wheel stud nuts.

(3) Raise trailer wheel clear of ground.

(4) Remove stud nuts and remove wheel and tire.

b. Disassembly. For disassembly of wheel and tire; repair of tire and tube; assembly of tire, tube and wheel, refer to TM 9–2610–200–20, TM 9–2610–200–34.

c. Installation. Install tire and wheel assembly by reversing procedure in *a* above. Torque wheel studs to 450–500 lbs feet.

3–30. Shock Absorbers

a. Removal.

NOTE

Jack up suspension arm until wheel is clear of ground.

(1) Remove attaching hardware from each end of shock absorber as shown in figure 3–12.

(2) Remove rubber bushing from eye at each end of shock absorber.

(3) Replace all defective parts.

b. Installation. Install shock absorbers by reversing procedure in *a* above.

3–31. Bumper Stop

a. Removal and Disassembly.

(1) Remove attaching hardware securing bumper rod (fig. 3–12).

(2) Disassemble in accordance with figure C–23.

(3) Replace all defective parts.

b. Assembly and Installation. Refer to figure 3–12 and C–23.

c. Adjustment (fig. 3–12).

(1) Adjust position of clevis on bumper rod until upper face of lower retaining washer is 4¾-inches below lower face of bumper support. Insert clevis pin into rod end clevis and secure with cotter pin. Tighten nut on bumper rod against clevis.

(2) Adjust self-locking nut at top of bumper rod until distance from upper face of lower retaining washer to lower face of upper retaining washer is 8 21/32-inches.

3–32. Hub and Drum Assembly

a. Removal (fig. C–24).

NOTE

Place frame on blocks with wheels clear of ground. Remove wheels (para 3–29) to permit removal of hub and drum assembly.

b. Disassembly. Disassemble hub and drum according to figure C–26.

c. Cleaning.

(1) Use dry cleaning solvent or mineral spirits paint thinner to clean or wash grease or oil from all metal parts.

(2) Rinse and dry thoroughly.

d. Inspection. Inspect brakedrum and hub for cracks or other evidence of damage. Inspect the braking surface of the drum for scoring or uneven wear. Inspect drum to limits specified in repair standards (para 3–43). Lightly oil tapered roller bearing cone and rollers with engine oil (OE–10) and rotate by hand to make sure that all rollers turn freely and smoothly. Inspect rollers for wear, scoring, pitting, or looseness. Inspect oil seal to make sure that the leather is pliable and in good condition. Inspect wheel hub bearing plain nuts for worn or damaged threads.

e. Repair. Replace all parts showing any evidence of above defects. If the braking surface of the drum is unevenly worn, turn the drum in a lathe provided the diameter of the braking surface will not exceed the maximum allowable diameter of 15.255 inches (*a*, fig. C–24).

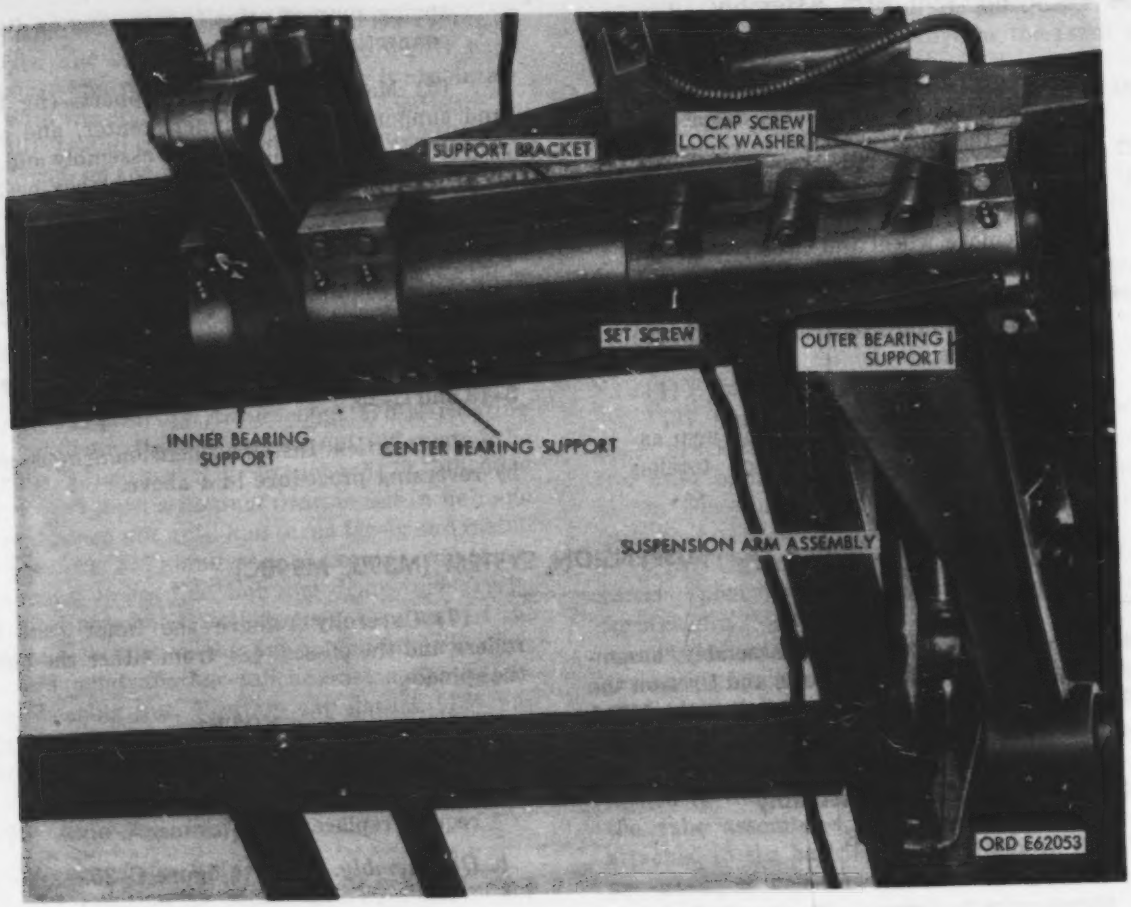


Figure 3–13. Suspension arm attaching points.

f. Assembly (fig. C–26).

NOTE

If any wheel studs were removed from the hub, replace by driving new studs into the hub. If bearing cups were removed from hub, press replacement cups into the hub until seated on shoulders.

Position brake drum on hub and install six bolts from inside the drum and secure with six nuts.

g. Installation.

(1) Lubricate bearing cones and rollers (fig. 3–1).

NOTE

The parenthetical key numbers below refer to figure C–24.

(2) Install inner tapered roller bearing cone and rollers (14) and seal (15) in inner end of hub (10), and secure with retainer ring (16). Slide hub and brakedrum assembly (10 & 12) onto suspension arm and install outer tapered roller bearing cone and rollers (8), key washer (7), and wheel hub bearing nut (5) flat side in.

NOTE

The key numbers shown below in parentheses refer to figure C–24.

(3) While rotating hub and drum tighten wheel hub bearing nut (5) until a distinct drag is felt in hub and drum. Loosen nut until hub and drum turn freely and install lock washer (6) and second wheel hub bearing nut (6) flat side out. Again test to see that hub and drum turn freely. When adjustment is satisfactory, bend tab of lock washer into groove of outer nut. Position cap gasket (4) and hub cap (3), and secure with three lock washers (2) and cap screws (1).

3–33. Suspension Arm Assembly

NOTE

If removal and disassembly of suspension arm assembly is necessary, disassemble only to the point required to replace defective part.

a. Removal.

(1) Remove wheel and tire (para 3–29).
(2) Disconnect shock absorbers (para 3–30).
(3) Disconnect bumper stop (para 3–31).
(4) Remove hub and drum (para 3–32).

CAUTION

Support rear end of suspension arm assembly to release pressure on torsion spring support prior to removing or disconnecting attaching points.

(5) Mark three bearing supports (fig. 3–13) and support brackets (inner, center, and outer) (fig. 3–31) for identification at assembly and, with suspension supported, remove eight hex-head cap screws and lock washers securing bearing supports to support bracket and remove supports and suspension from vehicle. Remove set screws from outer and center supports and remove the three supports from the suspension.

b. Disassembly and Assembly. Refer to figures 3–13 and C–23.

c. Installation. Install suspension arm assembly by reversing procedure in *a* above.

Section IX. SUSPENSION SYSTEM (M390, M390C)

3–34. Wheels and Tires

The procedures for removal, disassembly, assembly, and installation of the wheels and tires on the M390 and M390C trailers is the same as the M514 and XM545 trailers. Refer to paragraph 3–29.

3–35. Hub and Drum Assembly

NOTE

The key numbers shown below in parentheses refer to figure C–25 except where otherwise noted.

a. Removal.

(1) Raise frame on horses or blocking until wheel is clear of ground. Remove wheel as directed in paragraph 3–29.

(2) Remove the hub cap (19) and gasket (18) from the hub.

(3) Use a screwdriver or chisel and straighten the projection on the washer lock (17) bent against the outer bearing nut (16).

(4) Use wheel bearing adjusting nut wrench —5120–795–0946 (fig. C–49), and remove the outer bearing nut from the spindle. Straighten the projection bent against the inner bearing nut (16) and slide the keyed lock off the spindle. Remove inner bearing nut from spindle.

(5) Move hub and brakedrum assembly on the spindle to loosen outer tapered roller bearing cone and rollers (9); remove the cone from the spindle.

(6) Carefully lift the hub and brakedrum assembly from the spindle, taking care to prevent the inner tapered roller bearing cone and rollers (9) from falling out if it is removed with hub.

(7) Carefully remove the inner cone and rollers and the oil seal (8) from either the hub or the spindle.

NOTE

Do not remove the tapered roller bearing cups (12) from the hub unless the cups require replacement.

b. Disassembly. Refer to figure C–25.

NOTE

Disassemble only to the extent necessary to replace defective parts.

c. Cleaning. Clean parts according to paragraph 3–32.

d. Inspection. Inspect all parts.

e. Repair Replace all parts showing evidence of defects, damage, or normal wear beyond wear limits (para 3–45).

f. Assembly. Refer to figure C–25.

g. Installation.

(1) Lubricate tapered roller bearing cone and rollers (9) as specified in lubrication chart (fig. 3–2).

(2) Apply a thin coating (not over 1/16-inch thick) of bearing lubricant to inside of hub (10) and outside of spindle.

(3) Install the oil seal (8) on the axle spindle over the oil seal sleeve with the flange adjacent to the spindle shoulder.

(4) Install one of the cone and rollers (9) on the spindle adjacent to the oil seal with the large

outside diameter of the taper toward the center of the axle. The bearing may be tapped gently with a hammer and wooden block, keeping it absolutely true with the spindle to force it into position.

(5) Install the assembled wheel hub (10) and brakedrum on the spindle over the bearing and oil seal.

(6) Install the other cone and rollers (9) on the spindle with the large outside diameter of the taper away from the center of the axle, and slide the cone into the cup (12) installed in the hub. Install the inner bearing nut (16) on the spindle but do not tighten.

h. Wheel Bearing Adjustment. While rotating hub and drum, tighten bearing nut (16) using the bearing adjusting nut wrench—5120–795–0946 (fig. C–49) until a distinct drag is felt in hub and drum. Loosen nut until hub turns freely and install washer lock (17) and second bearing nut (16). Again test to see that hub and drum turn freely. When adjustment is satisfactory, bend one of the washer lock tabs on the flat on the inner bearing nut and bend another tab against a flat on the outer bearing nut. Position cap gasket (18) and hub cap (19) on drum and secure with three lock washers (20) and round-head screws (21).

3–36. Axle Assembly

a. Removal (fig. 3–14).

(1) Position the M390 trailer on a level surface with rear end of the frame under an overhead hoist which has sufficient capacity to support the trailer after removal of the wheels and axle. Position the M390C with the front end of the frame under the hoist.

(2) Lower the two front leveling jacks of the M390 trailer and the rear leveling jacks of the M390C to the vertical position.

NOTE

Do not attempt to raise the trailer with the jacks. Extend the jacks until the floats just touch the ground.

(3) Raise the retractable support assembly to the horizontal position.

(4) Place a suitable container under the rear end of the master cylinder and unscrew the upper end of the master cylinder hose from the cylinder. Allow the hydraulic fluid in the master cylinder and hose to drain into the container.

(5) Loosen two plain hex nuts at each turnbuckle. Remove the turnbuckles from the flexible control links and the extension rods (fig. 3–7).

(6) Using a lifting sling to engage the two tie down loops, attach the overhead hoist to the trailer. Remove the slack from the hoist cable, but do not raise the rear of the M390 or the front of the M390C with the hoist.

(7) Remove U-bolts securing each end of the axle assembly to the springs.

(8) Using the overhead hoist, raise the trailer high enough for the wheels to clear the frame and roll the wheels and axle assembly from beneath the trailer.

(9) Turn the axle assembly so the spring pads are down, block up the axle (under the pads) so the wheels are off the ground.

(10) Remove the wheels and tires.

(11) Remove the hubs and drums.

(12) Remove two hex nuts and the cable guide brackets securing each of the flexible control links to the back side of the brake backing plates. Disconnect link from lever and pull link from rear of backing plate.

(13) Using the brake spring remover and replacer (pliers) remove the brake shoe return springs (fig. C–11).

(14) Remove the slotted washer, flat washer, and spring washer securing the link to the pin and remove the link from the pin.

(15) Disconnect the brake hydraulic tube assemblies from the connector (12, fig. C–15) attached to the axle. Disconnect the outer ends of the tube assemblies from the tube connections attached to the backing plates. Remove the three pan-head screws, lock washers, and clamps securing the tubes to the axles; and remove the tube assemblies.

(16) Remove the hex nut (14, fig. C–15) securing the connector to the axle and remove the connector. Remove the plain stud and hex nut from the axle.

(17) Remove 12 plain hex nuts and lock washers from the brake mounting screws securing each of the backing plates to the axle flange and remove the backing plates with brake shoes and wheel cylinders as an assembly from the axle.

(18) Wedge a large screwdriver between the flange of the oil seal sleeve on each axle spindle and the shoulder on the spindle. Applying pressure evenly all the way around the sleeve, pry the sleeves from the spindles.

CAUTION

Use care in removing the sleeves to prevent marring or scratching the spindles.

b. Installation.

(1) Use a wooden block and a hammer, and drive a new oil sleeve onto each of the axle spindles using light blows all the way around the sleeve to avoid cocking the sleeves on the spindles or damag-

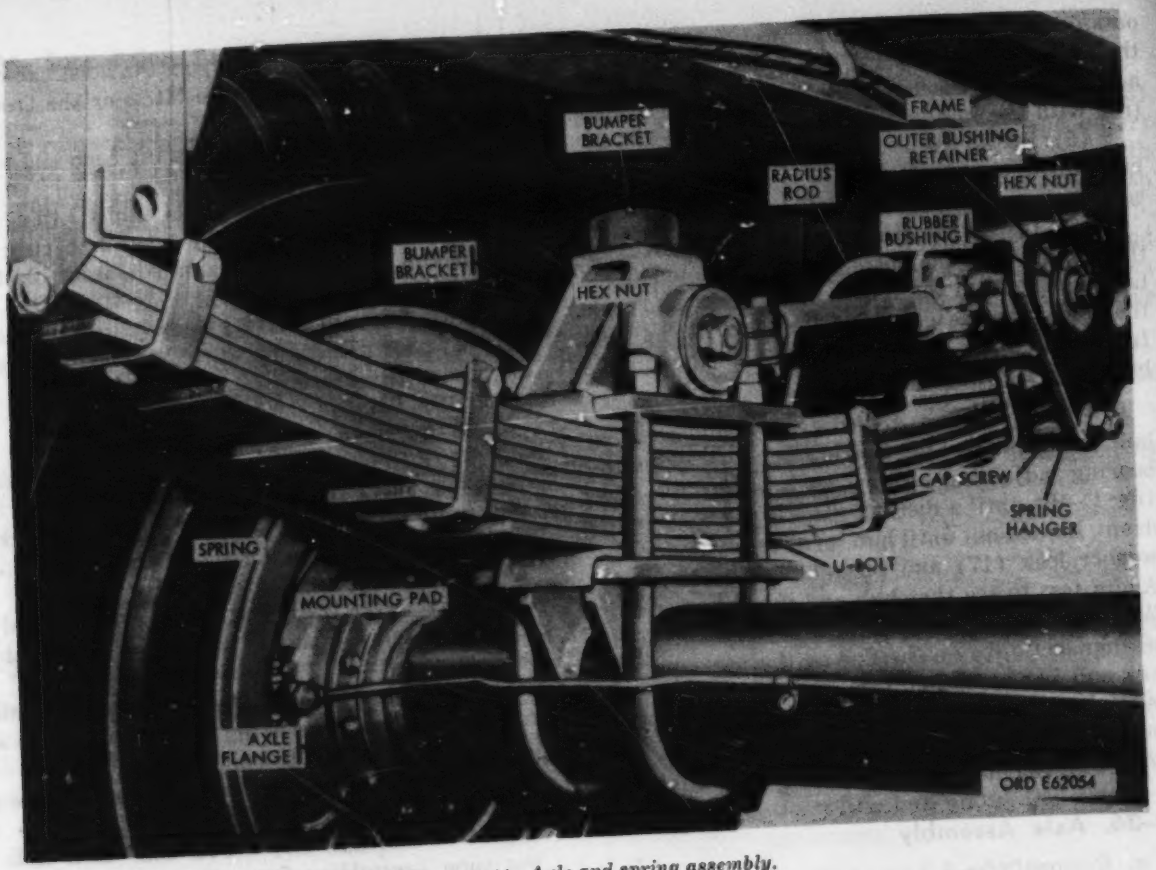


Figure 3–14. Axle and spring assembly.

ing the mating surfaces. Drive each sleeve onto the spindle as far as it will go so the sleeve flange fits snugly against the spindle shoulder.

(2) Position the backing plates, with attached brake shoes and wheel cylinders, on the axle flanges and secure each plate to flange with hex-head mounting screws, lock washers, and plain hex nuts.

(3) Install the plain stud in the 7/16-inch tapped hole in the axle and secure the stud in the hole with 7/16-inch plain hex nut. Install the connector (12, fig. C–15) on the stud and secure the connector to the stud with 7/16-inch plain hex nut.

(4) Position the hydraulic tube assemblies on the axle and install the fittings on the inner ends of the tubes in the tapped holes in the tube connector. Install the fittings on the outer ends of the tubes and attach to the backing plates. Secure the tubes to the axle with three 1/4-inch pan-head screws, 1/4-inch lock washers, and clamps as shown in figure 3–14.

(5) Install link on the pin attached to the upper end of rear brake shoes, making sure that the pin on the back side of the lever engages the slot in the end of the link. Secure the link to the pins with spring washer, flat washer, and slotted washer.

(6) Thread the ball end of the flexible control link through the hole in the backing plates, and attach to the lower end of the levers.

(7) Secure both flexible control links to the back side of the backing plates with a cable guide bracket, two 1/4-inch lock washers, and 1/4-inch hex nuts.

(8) Install the hubs and drums.

(9) Install the wheels and tires.

(10) Roll the wheels and axle assembly under the end of the trailer and into position under the springs. Turn the axle so that the spring pads are alined with the shear plates on the bottom of the springs.

(11) Using the overhead hoist, slowly lower the end of the trailer so the spring shear plates engage the spring pads on the axle and secure the axle at each end to the springs with two U-bolts (fig. 3–14) and eight 1/4-inch hex nuts.

(12) Remove the overhead hoist and lifting sling.

3) Screw the turnbuckles onto the extension nd flexible control links, but do not tighten rnbuckle retaining nuts.

4) Position the upper end of the flexible ol links on the underside of the trailer frame, ecure to the frame with a clamp, two 3/8-inch vashers, and 5/16 x 3/8 pan-head screws.

5) Install the swivel fitting on the upper end e master cylinder hose in the master cylinder t port (3, fig. C–15).

16) Bleed the hydraulic brake system.

17) Adjust the hand brakes.

7. Springs and Radius Rods

NOTE

The key numbers shown below in parentheses refer to figure C–41 except where otherwise indicated.

Adjustment. The radius rods (fig. 3–14) ntain correct axle alinement and transmit ping stresses to the frame. In addition the provide a means of compensating for slight erences in strength of springs to give correct ler height. To determine if adjustment is nec- ıry, measure the distance from the center of ıper bracket to the center of the cap screw in spring hanger as shown in figure 3–14. This ance should be 24¾-inches plus or minus inch when the trailer is empty. To adjust, re- ve the radius rods (*b* below) and move the ends g. C–43) an equal amount to lengthen or storten rod. Install rods (*c* below) and again check ve measurement to insure correct position of ings.

b. Removal.

(1) Perform the procedures described in ragraph 3–36*a*, (1) through (6).

(2) Remove the self-locking hex nut (6) and x-head cap screw (11) securing each end of the ring hanger.

(3) Remove the two hex nuts (1 and 2, fig. -43), hex-head cap screw (7), outer bushing retainers (3), spacer (6, fig. C–43), inner bushing retainers (3) and rubber bushings (4), securing the front end of each radius rod to the front spring hanger.

(4) Raise the end of the trailer high enough for the wheels to clear the frame and roll the assembled wheels, axle, springs, and radius rods from under the rear of the trailer.

(5) Remove the U-bolts, spring assembly, and assembled bumper bracket (5) and radius rod.

(6) Repeat step (5) above to remove the spring assembly from the opposite end of the axle.

(7) Remove radius rod from bumper bracket. Remove rod ends.

(8) To remove a leaf spring, remove four cap screws and hex-head nuts securing clips and spacer to spring assembly and remove leaf spring.

c. Installation.

(1) To install a leaf spring reverse the procedure in *b* (8) above.

(2) Install ends on radius rod and secure with hardware previously removed. Install radius rod bumper bracket.

(3) Position a spring assembly on the spring pad at one end of the axle and the assembled bumper bracket and radius rod on top of the spring upper shear plate. Secure the bumper bracket and spring to the axle with two U-bolts and eight ¾-inch hex nuts.

(4) Repeat steps (1), (2), and (3) above to install the spring assembly on the opposite end of the axle.

(5) Roll the assembled wheels, axle, springs, and radius rods under the end of the trailer and into position between the spring hangers so the spring ends are between the hanger side plates.

(6) Repeat step (2) above to secure radius rod to spring hanger.

(7) Secure each end of the springs in the spring hangers.

(8) Adjust length of radius rods (*a* above).

(9) Perform the procedures described in paragraphs 3–36 *b* (14) through (18).

Section X. FRAME AND ASSOCIATED PARTS (M514, XM545)

-38. Swivel Caster with Hub Assembly

(fig. 2–3)

a. Removal.

(1) Lower swivel caster with hub assembly the vertical position.

(2) Raise frame on horses or blocking until heel is clear of ground.

(3) Remove four hex nuts, lock washers, flat washers, and cap screws securing caster with hub assembly to frame and remove assembly.

b. Installation.

(1) Reverse the procedure in *a* (3) above.

(2) Swing caster up to stowed position and check to see that gravity pin can be inserted without binding. If necessary loosen hex nuts and shift assembly until gravity pin can be removed or in-

stalled without binding. Tighten hex nuts after adjustment.

3–39. Leveling Jacks

NOTE

The key numbers shown below in parentheses refer to figure C–33 except where otherwise indicated.

a. Sleeve Replacement.

(1) With leveling jack in upward, vertical position, remove cap screw (23) and lock washer (24), securing shoe and cover assembly to end of screw (15) and remove assembly.

(2) Loosen hose clamp (19) and remove clamp and socket (20) from screw (15). Use leveling jack crank handle and extend screw far enough to make machine screws (16) accessible.

(3) Remove four hex nuts (7), lock washers (8), and machine screws (16) securing sleeve (14) and plate (13) over end of gear box assembly. Slide sleeve off screw and remove plate from sleeve.

(4) Position plate (13) over lip of new sleeve (14) with countersunk screw hole side of plate toward sleeve. Slide sleeve and plate onto screw (15), and aline screw holes in sleeve and plate with screw holes in gear box assembly. Secure sleeve to gear box assembly with four machine screws (16), lock washers (8), and hex nuts (7).

(5) Position hose clamp (19) on bottom of sleeve. Position socket (20) on end of screw (15). Slide sleeve onto socket and tighten hose clamp.

(6) Install shoe and cover assembly on end of screw and secure with lock washer (24) and cap screw (23).

b. Plunger and Spring Replacement.

(1) Unscrew spring retainer (38) from support assembly (9), and remove retainer with retractor (39), plunger (36), and spring (37). Unscrew plunger from retractor and remove spring and retainer.

(2) Position spring retainer (38) and new spring (37) on retractor (39) and secure by screwing new plunger (36) onto retractor. Position assembled parts in bore in support assembly (9) and secure by screwing retainer into support.

c. Packing Replacement.

(1) With leveling jack locked in downward, vertical position, loosen two set screws (1) and self-locking nuts (40), and unscrew pivot locking studs (42) from both ends of yoke (3). Pull studs out slightly to free threaded ends from yoke.

(2) Pull yoke from cover (5) and support assemblies (9). Remove packing (4) from annular groove in bore of yoke.

(3) Position new packing (4) in annular groove in bore of yoke (3). Position yoke, counterbored face first, over cover (5) and between support assemblies (9), with threaded holes in ends alined with pivot locking studs (42).

(4) Screw pivot locking studs into ends of yoke as far as they will go and tighten two set screws (1) in yoke onto studs. Tighten two self locking nuts (40) sufficiently to give some retaining friction between support assemblies (9) and spacers (6).

d. Rear Leveling Jack Removal.

(1) With rear leveling jack locked in vertical position, use leveling jack crank handle and lower jack until it contacts the ground.

(2) Remove four hex nuts (7) and lock washers (8) securing support rods (27) to support assemblies (9) and remove four rods. Loosen two set screws (1), self-locking nuts (40), and unscrew pivot locking studs (42) from yoke (3).

(3) Unscrew spring retainer (38) from each support assembly (9) and pull out retractor (39), spring (37), and plunger (36) as an assembly. Remove four cap screws (33), lock washers (30) and flat washers (35) securing each support assembly to gear box assembly. Remove support assemblies from gear box assembly, being careful not to damage pin (44) or holes in gear box. Remove spacers (6) and remove gear box assembly with screw, sleeve, yokes, and connecting parts.

e. Disassembly.

(1) Partial disassembly of the leveling jack is accomplished during removal of jack from trailer. Refer to *d* above and proceed as follows.

(2) Remove four pins (44) from support or gear box. Do not remove bushings (47) or cases (43) from supports unless inspection (*g* below) indicates replacement is necessary. Remove unsatisfactory bushings or cases.

(3) Pull cover (5) with yoke (3) and packing (4) from cover (57). Pull yoke and packing from cover, and remove packing from yoke. Remove hex nut (53) and flat washer (54) from pin assembly (55), and remove pin assembly and washer (56) from cover (57). Remove set screw (49) from body (52), and remove spring (50) and pin (51) from body. Remove four hex nuts (7), lock washers (8), and cap screws (10) securing cover (57) to gear box assembly and remove cover and gasket (11).

(4) Remove screw (23), lock washer (24), shoe (22), and cover (21), clamp (19), socket (20), hex nuts (7), lock washers (8), machine

crews (16), sleeve (14), and plate (13). Remove wo cap screws (18) and stop (17) from end of crew (15). Turning gears with leveling jack rank handle, remove jack screw (15) from gear ox.

f. Cleaning. Clean all parts as directed in paragraph 3–32.

g. Inspection. Inspect all parts. Inspect screw (15) for straightness by rolling on a flat surface. Inspect pivot locking stud (42), plunger (36), sleeve (14) for tears in fabric or loose stitching. Inspect pivot locking stud (42), plunger (36), support assembly (9) and pin assembly (55) to the limits specified in repair standards (para 3–43).

h. Repair. Repair consists of replacement of damaged parts.

i. Leveling Jack Gear Box Assembly.

NOTE

The key numbers shown below in parentheses refer to figure C–34.

(1) *Disassembly.*

(*a*) Remove six socket-head cap screws (19) and external-teeth lock washers (9) and carefully remove cover (20) from gear box assembly (5). Remove cover gasket (21) and two headless straight pins (28). Remove drive gear shaft (25) with attached parts from gear box.

(*b*) Press outer annular ball bearing (22), spacer washer (23), and drive shaft spur gear (24) from drive gear shaft and remove Woodruff key (26). Press shaft out of inner annular ball bearing (27).

(*c*) Remove plain hex nut (10), external teeth lock washer (9) and screw (29) from gear box. Remove shouldered shaft (14) with attached parts from gear box. Press shouldered shaft out of annular ball bearing (11), shouldered washer (18), and spur gear (17). Remove Woodruff key (13) and pull spacer (16) off shaft. Press shaft out of worm gear (15) and remove Woodruff key (12). Press shaft out of annular ball bearing (11).

(*d*) Remove three remaining plain hex nuts (10), external-teeth lock washers (9) and screw (29) from gear box. Remove support (1) and thrust ball bearing (2) from top of gear box and remove worm gear (3). Remove support (8) and thrust ball bearing (7). Do not remove expansion plug (4) unless inspection (3) below indicated damage. If plug must be removed, drive out from inside of gear box.

(2) *Cleaning.* Clean all parts as directed in paragraph 3–32.

(3) *Inspection.* Inspect bearings for excessive wear and to see that they are secure and turn smoothly. Inspect thrust ball bearings (2 and 7) to the limits specified in repair standards (para 3–45). Inspect all gears for nicked, worn, or otherwise damaged teeth. Inspect worm (3), drive shaft spur gear (24) and spur gear (17) to the limits specified in repair standards (para 3–45). Inspect all shafts and Woodruff keys for nicks or burs. Inspect expansion plug (4) in gear box (5) for looseness.

(4) *Repair.* Small nicks or burs on shafts or gear teeth may be removed with a fine mill file. Replace all damaged parts and parts that fail to meet repair standards.

(5) *Assembly.*

(*a*) Stand support (8) on outside end and position thrust ball bearing (7) on support.

CAUTION

The inside diameters of the two races of lower thrust ball bearing (7) are different. The race with the larger inside diameter must be up, against the worm gear (3).

Position gear box (5) over thrust ball bearing and onto support. Lubricate worm gear (3) and bearings liberally with automotive and artillery grease (GAA). Install worm gear, small end down, in gear box and bearing. Install second thrust ball bearing (2) on upper end of worm gear.

CAUTION

The inside diameters of the two races of upper thrust ball bearing (2) are different. The race with the larger inside diameter must be down, against the worm gear.

(*b*) Position support (1) over upper thrust ball bearing on gear box. Aline holes in gear box and supports and install three screws (29), external teeth lock washers (9), and plain hex nuts (10). The screw nearest the cover of the worm gear (15) cannot be installed until after worm gear (15) is in place. Check to see that worm gear turns freely between thrust ball bearings.

(*c*) Install annular ball bearing (11) on end of shouldered shaft (14). Install Woodruff key (12) in shaft and aline worm gear (15) with key and press gear onto shaft. Install spacer (16) and Woodruff key (13). Aline spur gear (17) with key and press onto shaft against spacer. Install shouldered washer (18) on shaft and press annular ball bearing (11) onto end of shaft. Position shaft with attached parts inside gear box (5) and

install remaining screw (29), external-teeth lock washer (9), and plain hex nut (10).

(*d*) Press inner annular ball bearing (27) onto end of drive gear shaft (25) against shoulder. Install Woodruff key (26) in shaft, and press drive shaft spur gear (24) onto shaft and key against shoulder. Install spacer washer (23) on shaft, and press outer annular ball bearing (22) onto shaft against washer. Position shaft with attached parts inside gear box. Lubricate gears liberally with automotive and artillery grease (GAA). Install two headless straight pins (28) and cover gasket (21). Work cover (20) onto bearing (11), bearing (22), and pins (28) and push onto gear box (5) against gasket. Secure cover with six external-teeth lock washers (9) and sockethead cap screws (19). If expansion plug (4) was removed, apply gasket cement to seat in gear box and drive new plug into place. Check to see that gears turn freely.

j. Assembly of Leveling Jack.

NOTE

The key numbers in parentheses below refer to figure C–33.

(1) Aline screw (15) with threads in worm wheel gear at lower side of gear box assembly and, turning drive shaft with crank handle, work screw into gear box. Position stop (17) on upper end of screw and secure with two cap screws (18). Position cover (21) on shoe (22) and install three slotted nuts (25) and cotter pins (26) on ends of studs in shoe. Position plate (13) over lip of sleeve (14) with countersunk screw hole side of plate toward sleeve. Slide sleeve and plate onto screw (15), and aline screw holes in sleeve and plate with screw holes in gear box assembly and secure sleeve to gear box with four machine screws (16), lock washers (8), and plain hex nuts (7). Position clamp (19) on bottom end of sleeve. Position socket (20) on end of screw (15). Slide sleeve onto socket and secure to socket by tightening clamp. Install shoe (22) with attached cover on end of screw and secure with lock washer (24) and hex head screw (23).

(2) Position gasket (11) and cover (57) on upper support of gear box and secure with four cap screws (10), lock washers (8), and hex nuts (7). Insert pin (51) followed by spring (50) in body (52), and secure with set screw (49). Install washer (56) and pin assembly (55) in tapped hole in side of cover (57). Secure pin assembly with flat washer (55) and hex nut (53). Install packing (4) in annular groove inside yoke (3). Push yoke with packing (counterbored face first) onto top end of cover (5). Push cover (open end first) into top end of cover (57).

(3) If bushings (47) or cases (43) were removed from supports (9) press new bushings and/or cases into supports until seated on shoulders in supports. Install two pins (44) in each support.

(4) Complete assembly of jack during installation of jack on trailer.

k. Rear Leveling Jack Installation.

(1) Position gear box assembly with screw, sleeve, yokes, and connecting parts on ground with threaded holes in yoke (3) alined with pivot holes in rear leveling jack bracket support assemblies. Position spacers (6) on outside faces of bracket support assemblies. Position support assembly (9) on outside faces of spacers and gear box assembly. Check to see that support assemblies are properly seated on pins in gear box, and spacers (6) are properly seated around projecting ends of pivot stud bearings in bracket support assemblies and retractor plunger cases in support assemblies.

(2) Install four flat washers (35), lock washers (30), and cap screws (33) securing each support assembly (9) to gear box assembly. Screw two pivot locking studs (42) into yoke (3) and secure with two set screws (1). Tighten self-locking nuts (40) sufficiently to give some retarding friction between support assemblies (9) and spacers (6).

(3) Position plunger (36), spring (37), spring retainer (38), and retractor (39) in each support assembly and secure by screwing spring retainers into supports. Install two support rods (27) on each side of the support assembly and secure each rod with lock washer (8) and hex nut (7). Tighten nuts until tension is obtained in all four rods.

l. Front Leveling Jack Removal. The front leveling jack is removed in the same manner as the rear leveling jack (*d* above) except that no support rods (34) are used.

m. Front Leveling Jack Installation. The front leveling jack is installed in the same manner as the rear leveling jack (*k* above) except that no support rods (34) are used.

3–40. Retractable Support Assembly

a. Removal.

(1) Lower retractable support assembly to the vertical position (fig. 1–3).

(2) Raise frame on horses or blocking until support assembly is clear of ground.

(3) Remove the self-locking nut (3, fig. C–32) and plain washer securing the retractable support assembly to frame and remove support assembly. Remove second flat washer from top of support assembly.

b. Disassembly.

NOTE

The key numbers shown below in parentheses refer to figure C–32.

(1) Remove hex-head screw (14), lock washer (13), and flat washer (12) securing arm (15) to retractable support (21); remove the assembled arm and handle (16).

(2) Remove four hex-head bolts (17) and hex nuts (18) securing retractable support (21) between the legs of frame (19). Rotate the retractable support in the frame to free the support mounting brackets from the frame legs, and remove the retractable support from the frame.

(3) If further disassembly of support assembly (4) or retractable support (21) is required, disassemble in accordance with figure C–32. Disassemble only to the extent necessary to replace worn or damaged part.

c. Repair. Repair consists of replacement of damaged parts.

d. Assembly. Assemble by reversing procedure in *b* above.

e. Installation.

(1) Install one flat washer on top of retractable support assembly. Position support assembly under front of frame with top of support in hole in frame.

(2) Install second flat washer and self-locking nut (3, fig. C–32) securing support to frame. Tighten nut until it contacts the flat washer.

CAUTION

Do not overtighten the self-locking nut as this will cause the retractable support assembly to bind preventing proper steering.

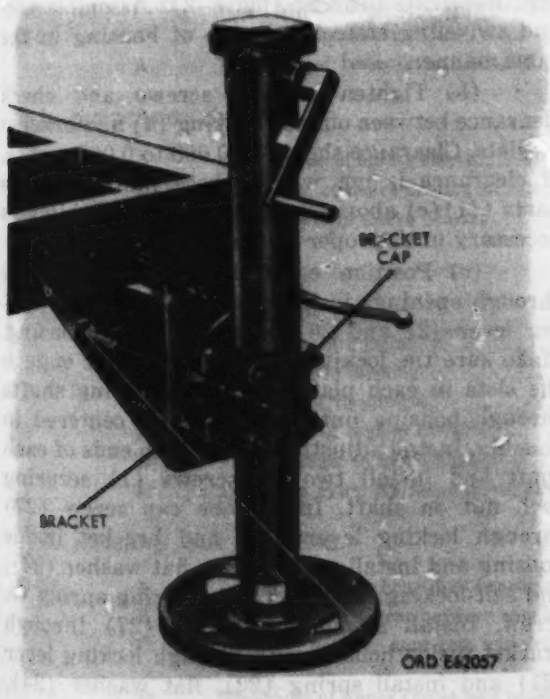


Figure 3–15. Leveling jack (M390 and M390C).

3–41. Leveling Jacks
(fig. 3–15)

NOTE

All leveling jacks are removed and installed in the same manner.

a. Removal. Remove four screws and washers securing bracket cap to leveling jack support bracket. Holding leveling jack securely, remove cap and leveling jack.

b. Cleaning and Inspection. Clean and inspect all parts.

c. Disassembly and Assembly. Disassemble and assemble according to figure C–38. Disassemble only to the extent necessary to replace worn or damaged parts.

d. Repair. Small nicks on gear teeth or threads may be smoothed or removed with a fine mill file. Replace all damaged or worn parts and assemblies.

e. Installation. Hold leveling jack in place and install cap on leveling jack support bracket. Install four hex-head screws and lock washers securing cap to bracket. Tighten screws.

3–42. Leveling Jack Bracket Support Assemblies

a. Single Swiveling Level Jack Bracket Support Assembly.

NOTE

The key numbers shown below in parentheses refer to figure C–39.

(1) *Removal.* Remove six cap screws (6) and lock washers (5) securing single swiveling leveling jack bracket support assembly to frame and remove support assembly.

(2) *Disassembly and Assembly.* Disassemble and assemble in accordance with figure C–39. Disassemble only to the extent necessary to replace worn or damaged parts.

(3) *Cleaning and Inspection.* Clean and inspect all parts.

(4) *Repair.* Repair consists of replacement of worn or damaged parts.

(5) *Installation.* Position support assembly under frame and install six lock washers (5) and cap screws (6) securing support to frame.

b. Double Swiveling Leveling Jack Bracket Support Assembly.

NOTE

The key numbers shown below in parentheses refer to figure C–40.

(1) *Removal.* Remove three cap screws (6), three lock washers (5), one cap screw (7), lock washer (5), two cap screws (8), two lock washers (5), and two flat washers (9) securing front double swiveling leveling jack bracket support assembly to frame and remove support assembly. Remove six cap screws (8) and lock washers (5) securing rear support assembly to frame and remove support assembly.

(2) *Disassembly.*

(*a*) Remove six cap screws (13) and lock washers (12) securing cover (11) to housing and remove cover. Remove self-locking hex nut (23), flat washer (24), and spring (22) from end of each cap screw (27) extending through locking levers (21 and 26) and remove cap screws from inside housing.

(*b*) Remove plain hex nut (14), lock washer (15), and cap screw (16) clamping each locking handle (17) on end of each shouldered shaft (3) and remove each handle. Remove two set screws (1) from each adjusting nut (2) on ends of shouldered shafts (3) and remove adjusting nut (2) on ends of shouldered shafts (3) and remove four adjusting nuts (2). Remove two cap screws (35) and lock washers (15) clamping each locking lever (21 and 26) on center of shouldered shafts (3) and, while holding levers, pull shafts from housing and remove levers.

(*c*) Remove cap screw (19) and lock washer (20) from center of plate inside housing. The remaining six cap screws (18) hold the bracket and plate together with bearings, shims and pilot in housing. Use care when removing these screws to avoid dropping any parts. Remove the six cap screws (18) and lock washers (5) from the plate inside housing and remove plate, bearing (4), pilot, dowel, shims (10), second bearing (4), guard, and bracket. Identify and tie shim set together for use during assembly. Disassemble second swiveling assembly in top of housing in the same manner.

(3) *Cleaning.* Clean all parts as directed in paragraph 3–32.

(4) *Inspection.* Inspect shouldered shafts (3) for nicks or distortion. Inspect locking levers (21 and 26) for cracks or wear. Inspect locking handles (17) for cracks. Inspect mating surfaces of plate, bearings (4), pilot, and bracket or plate for roughness or signs of wear.

(5) *Repair.* Repair consists of replacement of damaged parts.

(6) *Assembly.*

(*a*) Position pilot in opening in side of housing and position dowel in center of pilot. Position shim set (10), bearing (4), guard, and bracket (28) against pilot on outside of housing. Position second bearing (4) and plate on inside of housing and secure all parts together with six lock washers and cap screws. Install flat washer (20) and cap screw in center of plate inside housing. Lubricate bearing (fig. 3–2). Assemble second swiveling assembly in top of housing in the same manner.

(*b*) Tighten all cap screws and check clearance between outside bearing (4) and bracket or plate. Clearance should be 0.003 to 0.008 inches. If clearance is not within these limits, remove parts ((1)(*c*) above) and add or remove shims as necessary until proper clearance is obtained.

(*c*) Position each shouldered shaft (3) through openings in housing and slide each locking lever (21 and 26) on shaft inside housing. Make sure the locking lugs on each lever engage the slots in each plate. Continue pushing shafts through housing until each shaft is centered in housing. Install adjusting nuts (2) on ends of each shaft and install two set screws (1) securing each nut on shaft. Install one cap screw (27) through locking lever (26) and bracket inside housing and install spring (22), flat washer (24), and self-locking hex nut (23) securing spring on screw. Install second cap screw (27) through bracket inside housing and through locking lever (21) and install spring (22), flat washer (24), and self-locking hex nut (23).

(*d*) Position each locking handle (17) on end of shouldered shaft (3) and install cap screw (16), lock washer (15), and plain hex nut clamping handle on shaft. Position cover (11) on housing and install six lock washers (12) and cap screws securing cover to housing.

(7) *Installation.* Position two rear support assemblies under frame and secure each support to frame with six cap screws (8) and lock washers (5). Position front support assembly under frame and secure with three cap screws (6) and lock washers (5) around rear of support. Install one cap screw (7) and lock washer (5) in front center hole in support and two cap screws (8), lock washers (5), and flat washers (9) in two front outside holes in support.

Section XII. REPAIR STANDARDS AND POINTS OF MEASUREMENT

3–43. General

This section contains repair standards and points of measurement for key dimensions and clearances of new or rebuilt parts. These standards include dimensions to which parts may be worn before replacement, in order to receive maximum service with minimum replacement. Normally, all parts which have not been worn beyond the standard maximum limit or otherwise damaged (i.e., cracked, corroded, etc.) will be approved for service. In the "Sizes and Fits of New Parts" column, the letter "L" indicates a loose fit (clearance) and the letter "T" indicates a tight fit (interference).

3–44. Repair Standard (M514 and XM545)

a. Brake System.

Fig. No.	Ref. No.	Points of measurement	Sizes and fits of new parts	Field wear limits
C-11	A	Outside dia. anchor pin bearing surface	0.500 to 0.502	.101
	B	Inside dia. anchor bushing	0.502 to 0.504	.008
	A–B	Fit of anchor bushing on pin	0.000 to 0.004	.015
	C	Outside dia. of anchor bushing	0.935 to 0.937	.008
	D	Inside dia. of hole in brake shoe	0.9395 to 0.9410	.015
	C–D	Fit of anchor bushing in brake shoe	0.0025 to 0.006	.020
C-24	A	Inside dia. brakedrum	13.130 to 13.140	.060
	A	Thickness of brake lining	0.253 to 0.273	.125

b. Suspension System.

C-23	A	Outside dia. of spring sleeve	2.6194 to 2.6204	.005
	B	Inside dia. of sleeve bearing	2.6224 to 2.6234	.005
	A–B	Fit of sleeve in sleeve bearing	0.002L to 0.004L	.008L

c. Leveling Jack.

C-33	A	Outside dia. of stud	0.996 to 0.998	.012
	B	Inside dia. of bushing	1.001 to 1.002	.012
	A–B	Fit of stud in bushing	0.003L to 0.005L	.015L
	C	Outside dia. of plunger	0.9995 to 0.9997	.0015
	D	Inside dia. of case or bushing	0.9997 to 1.0003	.002
	C–D	Fit of plunger in case or bushings	0.0003 to 0.0008	.002
	E	Length of nylon pin assembly in lower cover (shoulder to end)	@	.025

d. Leveling Jack Gear Box.

C-34	A	Length between thrust ball bearings	1.67825 to 1.76075	
	B	Length of worm gear between shoulders	1.93750 to 1.96875	
	C	Backlash between spur gear and drive shaft spur gears	0.004 to 0.006 @2.625	.015
	D	Thickness of upper thrust ball bearing	0.733 to 0.743	.005
	E	Thickness of lower thrust ball bearing	0.654 to 0.664	.005

3–45. Repair Standards (M390 and M390C)

a. Brake System.

Fig. No.	Ref. No.	Points of measurement	Sizes and fits of new parts	Field wear limits
C–25	A	Inside diameter of drum	14.995 to 15.005	15.255
	B	Inside diameter of inner bearing cup surface	4.434 to 4.436	(*)
	B	Outside diameter of inner bearing cup	4.4375 to 4.4385	(*)
		Bearing cup fit	0.0015T to 0.0045T	
	C	Inside diameter of outer bearing cup surface	4.434 to 4.436	(*)
	C	Outside diameter of outer bearing cup	4.4375 to 4.4385	(*)
		Bearing cup fit	0.0015T to 0.0045T	2.6265
	D	Parallelism of surfaces including lateral runout when assembled to hub	1.183 to 1.193	(*)

b. Axle.

	Diameter of bearing surfaces of axle	2.6250 to 2.6260	2.6245

CHAPTER 4

SHIPMENT AND STORAGE AND DESTRUCTION OF MATERIEL TO PREVENT ENEMY USE

Section I. SHIPMENT AND LIMITED STORAGE

4–1. Domestic Shipping Instructions

a. Preparation for Shipment. When shipping the 1-ton, 2-wheel chassis trailers M514 and XM-545 or the 2-ton, 2-wheel chassis trailers M390 and M390C, the officer in charge of preparing the shipment will be responsible for furnishing materiel in a serviceable condition, properly cleaned, processed, packaged, and packed.

b. Removal of Preservatives Prior to Shipment. Personnel withdrawing the 1-ton, 2-wheel chassis trailers M514 and XM545 or the 2-ton, 2-wheel chassis trailers M390 and M390C from storage for shipment must not remove preservatives other than to insure that the materiel is complete and serviceable. If it is determined that preservatives have been removed, they must be restored to the prescribed level prior to shipment.

NOTE

Removal of preservatives is the responsibility of the organization receiving the shipment.

c. Army Shipping Documents. Prepare all Army shipping documents in accordance with AR 725–50.

4–2. Limited-Storage Instructions

a. General.

(1) The 1-ton, 2-wheel chassis trailers M514 and XM545, and the 2-ton, 2-wheel chassis trailers M390 and M390C received for storage and already processed for domestic shipment, as indicated in DA Form 9–3, must not be reprocessed, unless inspection performed on receipt of materiel reveals corrosion, deterioration, etc.

(2) The 1-ton, 2-wheel chassis trailers M514 and XM545, and the 2-ton, 2-wheel chassis trailers M390 and M390C to be prepared for limited storage must be given a technical inspection and processed as prescribed in MIL–STD–1177.

b. Receiving Inspections.

(1) Immediately upon receipt of the 1-ton, 2-wheel chassis trailers M514 and XM545, and the 2-ton, 2-wheel chassis trailers M390 and M390C for storage, they must be inspected and serviced as prescribed in paragraphs 2–1 through 2–3. Perform a systematic inspection and replace or repair all missing or broken parts. If repairs are beyond the scope of organizational maintenance personnel and materiel will be inactivated for an appreciable length of time, place materiel in limited storage and attach tags specifying the repairs needed. The reports of these conditions will be submitted by the organizational maintenance commander for action by an army maintenance unit.

(2) When materiel is inactivated, it will be processed in accordance with MIL–STD–1177.

(3) Prepare a DD Form 6 for all shipments received in a damaged or otherwise unsatisfactory condition, due to deficiencies in preservation, packaging, packing, marking, handling, loading, or storage and for apparently excessive preservation.

c. Storage Site. The preferred storage site for the 1-ton, 2-wheel chassis trailers M514 and XM545, and the 2-ton, 2-wheel chassis trailers M390 and M390C is under cover in dry, covered sheds. When it is necessary to store materiel outdoors, protect it against the elements.

d. Inspection During Storage. Perform a visual inspection periodically to determine general condition. If corrosion is found, remove it and clean, paint, and treat vehicle with the prescribed preservatives.

NOTE

Touchup painting will be in accordance with TM 5–618.

e. Removal from Limited Storage.

(1) If the 1-ton, 2-wheel chassis trailers M514 and XM545, and the 2-ton, 2-wheel chassis trailers M390 and M390C are not shipped or issued upon expiration of the limited storage period, process as applicable in accordance with TB 9–300–2/1.

(2) If the 1-ton, 2-wheel chassis trailers M514 and XM545, and the 2-ton, 2-wheel chassis trailers M390 and M390C to be shipped will reach their destination within the limited storage period, it need not be processed upon removal from storage, unless inspection reveals it to be necessary according to anticipated in-transit weather conditions.

(3) When it has been ascertained that the 1-ton, 2-wheel chassis trailers M514 and XM545, and the 2-ton, 2-wheel chassis trailers M390 and M390C are to be placed into immediate service, reprocess it in accordance with TB 9–300–2/1.

4–3. Loading and Blocking Instructions (M514 and XM545)

a. All blocking instructions specified herein are to be kept to a minimum and are in accordance with the instructions and rules governing the loading of department of defense materiel on open top cars of the Association of American Railroads. Additional blocking may be added as required at the discretion of the officer in charge. Double-headed nails may be used, if available, except in the lower piece of the drawbar support.

b. Materiel will be loaded and unloaded with the use of hoisting equipment, when available.

c. In making shipment of the 1-ton, 2-wheel trailer chassis M514 and XM545 on flatcars, up to five vehicles may be loaded on a car. When five vehicles are loaded on a 40-foot flatcar the vehicles are positioned with rear ends and front ends alternately down on floor of flatcar as illustrated in figure 4–1. When only four vehicles are loaded on a 40-foot flatcar, or five units are loaded on a 53-foot 6-inch flatcar, they will all be positioned with front end down on floor of flatcar. When a vehicle is loaded with rear end down on floor, the front leveling jacks are lowered to the floor as illustrated to support the front ends, and an additional 2 x 4-inch support is added between the lunette and the floor. The blocking, bracing, and tie downs used are as follows:

(1) *Block under front ends.* When loading with front end down, nail wood block 2 x 4 x 18-inches to floor of car under front end of vehicle.

(2) *Blocks for wheels.* Nail one shaped wheel chock block to floor of car in front of and behind each wheel. Outside of each tire, position two blocks, 2 x 4 x 36-inches and 2 x 4 x 24-inches. Use ½-yard burlap to wrap blocks to prevent scuffing tires, nail 36-inch block to car floor, and nail 24-inch block on top of 36-inch block.

(3) *Front jack blocks.* When loading with rear end down, nail six wood blocks 2 x 4 x 12-inches to floor of car to secure each front jack. One block at each side of jack shoe, one in front, one behind, and two across the tops of two side blocks and shoe.

(4) *Brace for lunette.* When loading with rear end down, position 2 x 4 x 60 wood brace with pointed end in lunette eye and nail lower end to floor of car.

(5) *Rear tie down.* When loading with rear end down, anchor rear end to floor with 1¼-inch steel band 36-inches long, over rear jack bracket supports and fasten to floor with two anchor plates secured with eight cement-coated, sevenpenny nails.

(6) *Frame tie downs.* Use four tie downs, each consisting of four strands, number 9 black annealed wire, twisted. Locate tie downs, two on each side of frame, one near front and one near rear of side frame, and connect to stake pockets on side of flatcar.

4–4. Loading and Blocking Instructions (M390 and M390C)

a. Follow procedures outlined in paragraph 4–3.

b. All item reference letters in parentheses in (1) through (6) below refer to details and locations shown in figure 4–2.

(1) *Brake wheel clearance (A).* Load chassis trailers on flatcars with a minimum clearance of 4-inches below and 6-inches above, behind, and to each side of the brake wheel. Increase clearance as much as is consistent with proper location of load.

(2) *Chock blocks (B) (8 x 8 x 12, four required per trailer).* Locate the 45° face of a chock block (B) against the front and rear of each wheel. Nail heel of each block to car floor with fortypenny nails, and toenail both sides of each block to car floor with fortypenny nails.

(3) *Cushioning material (C).* Locate suitable cushioning material, such as waterproof paper or burlap, between tires and cleats (D). The cushioning material should protrude beyond cleats (D) at floor and above cleats (D) alongside tires. Locate four pieces of 1 x 4 x 18 pine (C) with eight pieces of ⅛ x 8 x 18 corrugated cardboard between the trailers so they are supported by the small channel crossmembers in the wheel wells. Locate one piece

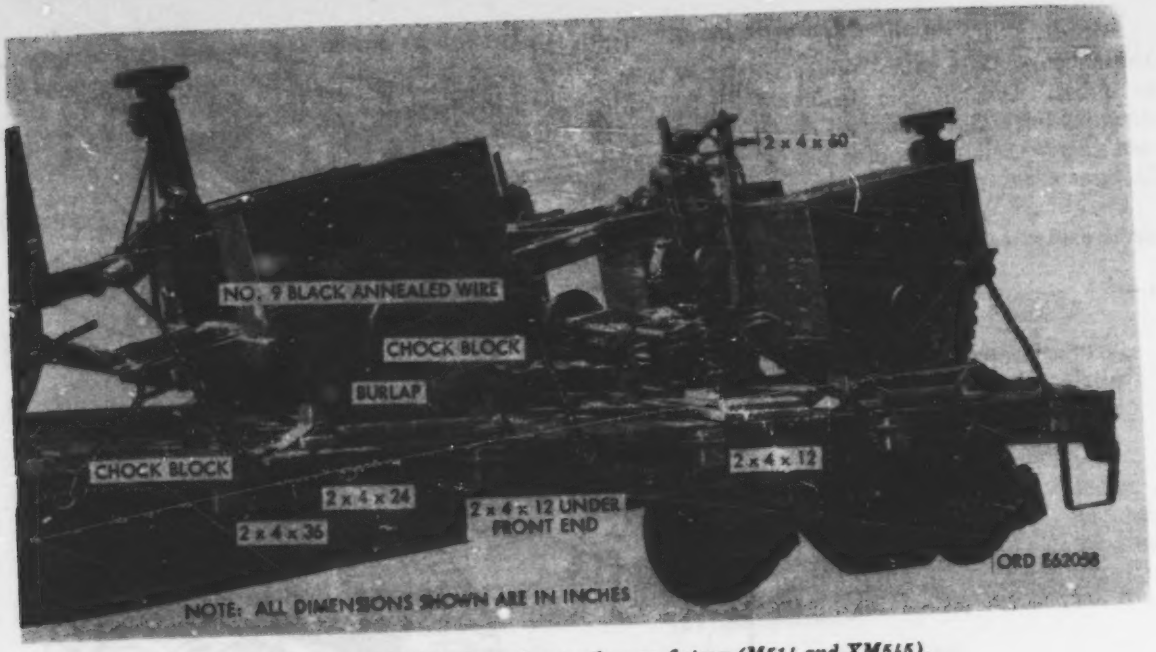

2 x 4 x 60
NO. 9 BLACK ANNEALED WIRE
CHOCK BLOCK
BURLAP
CHOCK BLOCK
2 x 4 x 24
2 x 4 x 35
2 x 4 x 12 UNDER FRONT END
2 x 4 x 12
ORD E62058
NOTE: ALL DIMENSIONS SHOWN ARE IN INCHES

Figure 4–1. Method of loading trailers on flatcar (M514 and XM545).

of ⅛ x 11 x 18 corrugated cardboard (C) between the slope of the trailer wheel wells on each side. Locate one piece of ⅛ x 8 x 12 corrugated cardboard between the drawbar and the drawbar support (E).

(4) *Floor side cleats (D) (2 x 4, length to suit, four required per bottom trailer).* Locate two side cleats (D) against each wheel (one on either side), with cushioning material as specified in (3) above. Nail each end of each cleat to a chock block (B) with four thirtypenny nails. Brace the center of each cleat against the tire with a 2 x 4 x 8 nailed to the car floor with thirtypenny nails.

(5) *Drawbar support (E) (one 2 x 8 x 20 and two 2 x 4 x 8 required per bottom trailer).* Locate the 2 x 8 x 30 support (E) under the drawbar directly below the lunette mounting bracket with cushioning material as specified in (3) above. Nail the support to the car floor with thirtypenny nails. Nail 2 x 4 x 8 brace on top of the drawbar support on each side of the drawbar with thirtypenny nails staggered.

(6) *Trailer tiedowns.*

(*a*) *Top trailer to bottom trailer axle (F).* Locate two 4 x 4 x 11 blocks (G) on end between the bottom trailer axle and the two main frame rails on the top trailer. Secure each block to the adjacent bottom trailer spring with No. 9 annealed wire. Secure the main frame rails of the top trailer to the axle of the bottom trailer with 2 x 0.050 high-tension steel strapping (F). Tighten strapping with tensioning tool and crimp seal.

(*b*) *Tiedown loops to lifting bars (H).* Secure the tiedown loops on the rear end of the top trailer to the lifting bars on the bottom trailer drawbar with 1¼ x 0.035 high-tension steel strapping (H). Secure the tiedown loops on the rear end of the bottom trailer to the lifting bars on the top trailer drawbar with 1¼ x 0.035 high-tension steel strapping (H). Tighten strapping with tensioning tool and crimp seal.

(*c*) *Tiedown loops to flatcar stake pockets (J).* Secure the four tiedown loops (two at the front and two at the rear) on the bottom trailer to the flatcar stake pockets with 2 x 0.050 high-tension steep strapping (J). Tighten strapping with tensioning tool and crimp seal.

(*d*) *Drawbar to drawbar support (K).* Place a piece of 2 x 0.050 high-tension steel strapping (K) over the bottom trailer drawbar immediately behind the guide bar on the front end of the drawbar, and nail the ends of the strapping to the drawbar support (E) with twentypenny nails (preferably double-headed nails).

(*e*) *Retractable support to flatcar floor (L).* Place a piece of 2 x 0.050 high-tension steel strapping (L) over the bottom trailer retractable support, and nail the ends of the strapping to the flatcar floor with twentypenny nails (preferably doubleheaded nails).

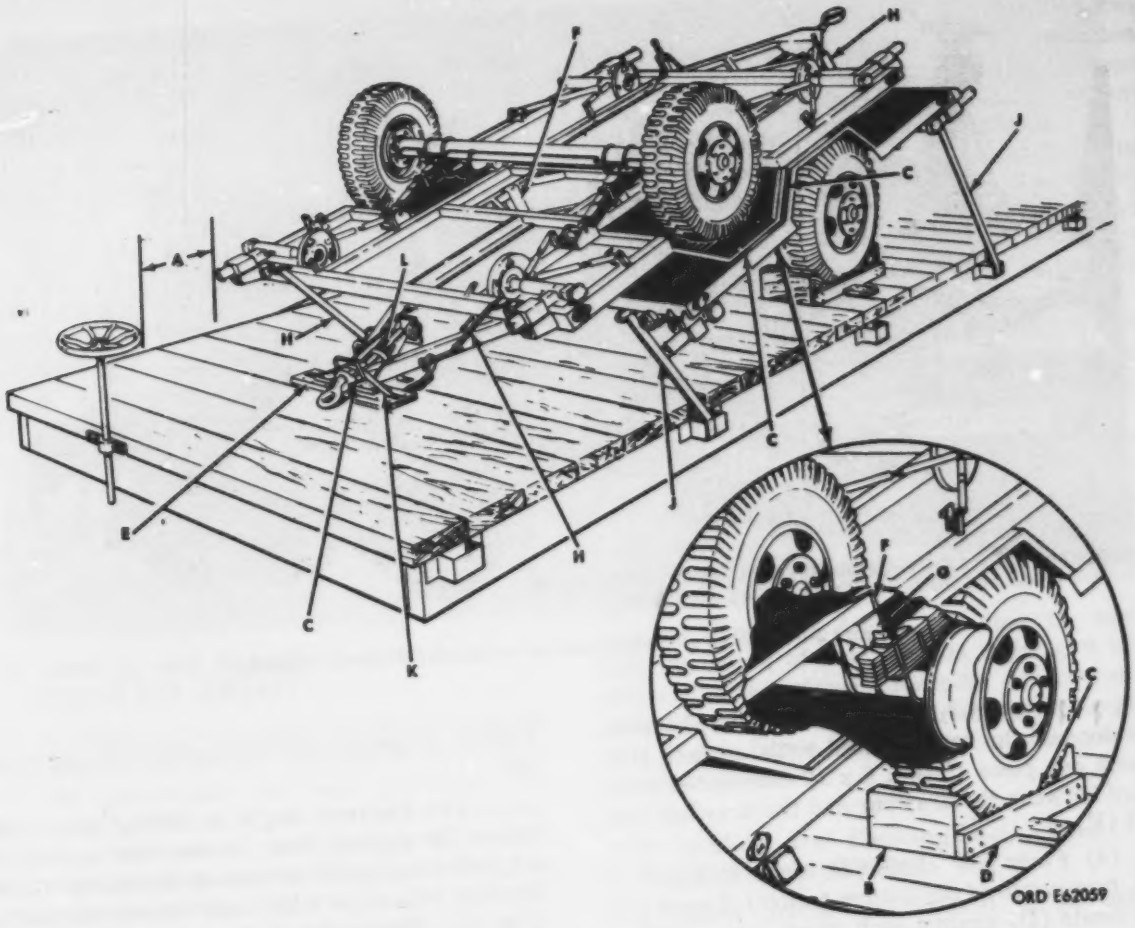


Figure 4–2. Method of loading trailers on flatcar (M390 and M390C).

Section II. DEMOLITION OF MATERIEL TO PREVENT ENEMY USE

4–5. General

a. Destruction of the 1-ton, 2-wheel chassis trailers M514 and XM545, and the 2-ton, 2-wheel chassis trailers M390 and M390C when subject to capture or abandonment on the combat zone, will be undertaken by the using arm only when, in the judgement of the unit commander concerned, such action is necessary in accordance with orders of, or policy established by, the Army commander. When in the hands of maintenance personnel or in storage, destruction will be in accordance with TM 750–244–6 and the information below as applicable.

b. The information which follows is for guidance only. Certain of the procedures outlined require the use of explosives and incendiary grenades which normally may not be authorized items of issue to the using organization. The issue of these and related materials and the conditions under which destruction will be affected are command decisions in each case, according to the tac-

cal situation. Of the several means of destruction, those most generally applicable are—

Mechanical	Requires axe, pick mattock, sledge, crowbar, or similar implement.
Burning	Requires gasoline, oil, incendiary grenades, or other flammables, or welding or cutting torch.
Demolition	Requires suitable explosives or ammunition.
Gunfire	Includes artillery, machine guns, rifles using rifle grenades, and launchers using antitank rockets. Under some circumstances hand grenades may be used.
Disposal	Requires burying in the ground, dumping in streams or marshes, or scattering so widely as to preclude recovery of essential parts.

In general, destruction of essential parts followed by burning will usually be sufficient to render the trailer useless. However, selection of the particular method of destruction requires imagination and resourcefulness in the utilization of the facilities at hand under the existing conditions. Time is usually critical.

c. If destruction to prevent enemy use is resorted to, the materiel must be so badly damaged that it cannot be restored to a usable condition in the combat zone either by repair or cannibalization. Adequate destruction requires that all parts essential to the operation of the materiel, including essential spare parts, be destroyed or damaged beyond repair. However, when lack of time and personnel prevent destruction of all parts, priority is given to the destruction of those parts most difficult to replace. Equally important, the same essential parts must be destroyed on all like materiel so that the enemy cannot construct one complete unit from several damaged ones.

d. If destruction by demolition or gunfire is directed, due consideration should be given to—

(1) Selection of a point of destruction that will cause greatest obstruction to enemy movement and also prevent hazard to friendly troops from fragments or ricocheting projectiles which may occur incidental to the destruction.

(2) Observance of appropriate safety precautions.

4–6. Destruction of Trailers

a. Method I—Destruction by Mechanical Means.

(1) Using an axe, pick mattock, sledge, or other heavy implement, smash all vital elements such as lights, brake hose assemblies, wiring harness, hand brake cables, leveling jacks, and all equipment mounted in the trailer.

(2) If practicable, deflate tires before slashing.

WARNING

If tires are inflated, exercise care to prevent injury should tires blow out while being slashed.

b. Method II—Destruction by Burning.

(1) Using an axe, pick mattock, sledge, or other heavy implement, smash all vital elements such as lights, reflectors, plug and cable assemblies, support legs, and hand brake assembly.

(2) Slash tires.

WARNING

If tires are inflated, exercise care to prevent injury should the tires blow out while being slashed.

(3) Place combustible on and about the trailer. Pour gasoline or oil over the combustible and the trailer, ignite by means of an incendiary grenade fired from a safe distance, a combustible train of suitable length, or other appropriate means. Take cover immediately. A hot fire is required to render the materiel useless.

WARNING

Cover must be taken without delay, since an early explosion of the explosive ammunition (if present) may be caused by the fire. When igniting gasoline, due consideration should be given to the highly flammable nature of gasoline and its vapor. Carelessness in its use may result in painful burns. If explosive ammunition is present, the danger zone is about 250 yards. Elapsed time: about 6 minutes.

c. Method III—Destruction by Demolition.

(1) Planning for simultaneous detonation, prepare two 2-pound demolition charges, using two 1-pound TNT blocks, or equivalent per charge together with the necessary detonating cord to make up each charge. Place the two charges on the axle, the first charge as close as possible to the left wheel of the trailer. Connect the two charges for simultaneous detonation with detonating cord.

(2) Provide for dual priming to minimize the possibility of a misfire.

(3) Destroy the tires by placing an incendiary grenade under the tires on each side of the trailer. The detonation of the demolition charges should be delayed until the incendiary fires are well started. This will prevent the fires from being extinguished by the blast when the charges are detonated.

WARNING

Cover must be taken without delay, since an early explosion of the charges may be caused by the incendiary fires. The danger area is approximately 250 yards. Elapsed time: about 8 minutes.

(4) Detonate the charges. For complete details on the use of demolition materials and methods of priming and detonating demolition charges, refer to FM 5–25. Training and careful planning are essential.

d. Method IV—Destruction by Disposal.

(1) Using an axe, pick mattock, sledge, or other heavy implement, smash all vital elements such as lights, brake hose assemblies, wiring harness, hand brake cables, leveling jacks, and all equipment mounted in the trailer.

WARNING

If tires are inflated, exercise care to prevent injury should tires blow out while being slashed.

(3) Bury the trailer in the ground, or dump trailer in a stream or marsh. If time does not permit, scatter parts widely to prevent recovery by enemy of essential parts.

APPENDIX A

REFERENCES

A–1. Publication Indexes

The following indexes should be consulted for latest changes or revisions and for new publications relating to materiel covered in this technical manual.

Index of Army Motion Pictures and Related Audio-Visual Aids	DA Pam 108–1
Military Publications:	
Index of Administrative Publications	DA Pam 310–1
Index of Blank Forms	DA Pam 310–2
Index of Training Publications	DA Pam 310–3
Index of Technical Manuals, Technical Bulletins, Supply Manuals (types 7, 8 and 9), Supply Bulletins, and Lubrication Orders	PA Pam 310–4
Index of Supply Catalogs and Supply Manuals (Excluding types 7, 8, and 9)	DA Pam 310–6

A–2. Forms

Refer to TM 38–750, the Army Maintenance Management System (TAMMS), for instructions on the use of maintenance forms pertaining to this materiel.

Equipment Acceptance and Registration Record	DA Form 2408–8
Equipment Maintenance Log (Consolidated)	DA Form 3409
Equipment Transfer Report	DA Form 2408–7

A–3. Publications

Camouflage	FM 5–20
Repair of Frames	TB 9–2300–247–40
Color and Marking of Military Vehicles, Construction Equipment, and Materials Handling Equipment	TB 746–93–1
Operation and Maintenance of Ordnance Materiel in Cold Weather—0° to −65°	TM 9–207
Paints and Protective Coating	TM 5–618
Operator's Manual: Welding Theory and Application	TM 9–237
Deepwater Fording of Ordnance Materiel	TM 9–238
Care and Maintenance of Pneumatic Tires	TM 9–2610–200–20
Field and Depot Maintenance: Repair and Rebuild of Pneumatic Tires and Tubes	TM 9–2610–200–34
Manual for the Wheeled Vehicle Driver	TM 21–305
Administrative Storage of Equipment	TM 740–90–1
Storage and Materials Handling	TM 743–200–1
Explosives and Demolition	FM 5–25
Basic Cold Weather Manual	FM 31–70
Northern Operations	FM 31–71
Standards for Oversea Shipment or Domestic Issue of Combat, Tactical, and Special Purpose Vehicles	TB 9–2300–281–35
Inspection, Care and Maintenance of Antifriction Bearings	TM 9–214
Electrical Equipment (Bendix-Scintilla)	TM 9–1825E
Power Brake System (Bendix-Westinghouse)	TM 9–1827A
Driver Selection and Training (Wheeled Vehicles)	TM 21–300

APPENDIX B

MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

B–1. General

The maintenance allocation chart (MAC) assigns authorized maintenance functions to each maintenance category. These functions are assigned to the lowest available maintenance category based on past experience in the following considerations:

a. Skills available.

b. Time required.

c. Tools and test equipment authorized.

If the maintenance function is a replacement function only, the item is not listed in the MAC. The listing of such item, if included in the Repair Parts and Special Tool List for the end item, is automatic authority to replace at the lowest maintenance level to which the part is authorized. Deviation from maintenance operations as allocated in the MAC is authorized only upon approval of the Army commander representative.

B–2. Definitions

Maintenance functions will be limited to and defined as follows:

a. Inspect. To determine serviceability of an item by comparing its physical, mechanical, and electrical characteristics with established standards.

b. Test. To verify serviceability and to detect electrical or mechanical failure by use of test equipment.

c. Service. To clean, to preserve, to charge, and to add fuel, lubricants, cooling agents, and air.

d. Adjust. To rectify to the extent necessary to bring into proper operating range.

e. Align. To adjust specified variable elements of an item to bring to optimum performance.

f. Calibrate. To determine the corrections to be made in the readings of instruments or test equipment used in precise measurement. Consists of the comparison of two instruments (one of which is a certified standard of known accuracy) to detect and adjust any discrepancy in the accuracy of the instrument being compared with the certified standard.

g. Install. To set up for use in an operational environment such as an emplacement, site, or vehicle.

h. Replace. To replace unserviceable items with serviceable like items.

i. Repair. Those maintenance operations necessary to restore an item to serviceable condition through correction of material damage or a specific failure. Repair may be accomplished at each category of maintenance.

j. Overhaul. Normally, the highest degree of maintenance performed by the Army in order to minimize time work in process is consistent with quality and economy of operation. It consists of that maintenance necessary to restore an item to completely serviceable condition as prescribed by maintenance standards in technical publications for each item of equipment. Overhaul normally does not return an item to like new, zero mileage, or zero hour condition.

k. Rebuild. The highest degree of materiel maintenance. It consists of restoring equipment as nearly as possible to new condition in accordance with original manufacturing standards. Rebuild is performed only when required by operational considerations or other paramount factors and then only at the depot maintenance category. Rebuild reduces to zero the hours or miles the equipment, or component thereof, has been in use.

l. Symbols. The uppercase letter placed in the appropriate column indicates the lowest level at which that particular maintenance function is to be performed.

C	Operator/Crew
O	Organizational Maintenance

F	Direct Support Maintenance
H	General Support Maintenance

B–3. Explanation of Columns

a. Column 1, Group Number. This column lists group numbers, the purpose of which is to identify components, assemblies, subassemblies, and modules with the next higher assembly.

b. Column 2, Functional Group. This column lists the noun names of components, assemblies, subassemblies and modules on which maintenance is authorized.

c. Column 3, Maintenance Functions. This column carries a heading for each of the maintenance functions, defined in paragraph B–2 of this section.

d. Column 4, Tools and Equipment. This column shall be used to specify, by code, those tools and test equipment required to perform the designated maintenance function.

e. Column 5, Remarks. This column will list any special information or instructions required for performance of the designated maintenance function.

Section II. MAINTENANCE ALLOCATION CHART

(1)	(2)	(3) Maintenance function											(4)	(5)
Group No.	Functional group	Inspect	Test	Service	Adjust	Aline	Calibrate	Install	Replace	Repair	Overhaul	Rebuild	Tools & equipment	Remarks
	GROUP 06—ELECTRICAL													
0609	Lights	C							O	O				
0613	Chassis wiring harness	C							O	O				
	GROUP 11—REAR AXLE													
1100	Rear axle assembly	C							O	F				
	GROUP 12—BRAKES													
1201	Handbrakes	C			O			O	O	O				
	Service brakes	C							F					
1204	Hydraulic brake system master cylinder	O		C					O					
	Cylinder, wheel	O							O	O				
	Lines and fittings	C												
1208	Air brake system								O	O				
	Couplings, lines and hoses	C							O					
	Valve relay and exhaust	C							O	O				
	Filter	C							O	F				
	Chamber	C							O					
	Reservoir	C			O									
	GROUP 13—WHEELS AND SUSPENSION ASSEMBLY													
1301	Bar, torsion and anchor	O								O				
	Arm suspension	C								O				
	Linkage and anchor	O				O				O				
1311	Bearing, hub	O			O	O				O				
	Hub and seal	O								O	F			
	Drum, brake	O		F						O	O			
	Wheel and stud	C								O	F			
1313	Tires	C			C					O	O			
	Tubes	O	O											
	GROUP 15—FRAME													
1501	Frame	C								F				
1503	Pintle and towing attachments	C								O				
1507	Landing leg and caster	C								O	F			
1507	Jack, leveling	C		O						O	F			
	Support and bracket	O								O	F			
	Caster, swivel	C								O	O			

(1) Group No.	(2) Functional group	Maintenance function											Tools & equipment	Remarks
		Inspect	Test	Service	Adjust	Align	Calibrate	Install	Replace	Repair	Overhaul	Rebuild		
	GROUP 16—SPRINGS AND SHOCK ABSORBERS													
1601	Springs	C	O						O	O				
1604	Shock absorber and bumper	C							O					
1605	Radius rod	C				O			O					
	GROUP 22—CHASSIS ACCESSORY ITEMS													
2202	Accessory item	C							O					
2210	Data plates	C							O					
	GROUP 26—SPECIAL TOOLS													
2604	Special tools								O					

APPENDIX C

ORGANIZATIONAL, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST

Section I. INTRODUCTION

C–1. Scope

This appendix lists basic issue items, repair parts, special tools, and maintenance and operating supplies required for the performance of organizational, direct support and general support maintenance of the Trailer, Chassis, 1-Ton, 2-Wheel M514, XM545 and Trailer, Chassis, 2-Ton, 2-Wheel M390 and M390C.

C–2. General

This appendix is divided into the following sections:

a. Basic Issue Iitems. Not applicable.

b. Items Troop Installed or Authorized List. Not applicable.

c. Repair Parts—Section II. A list of repair parts authorized for the performance of maintenance at the organizational, direct support and general support level in figure and item number sequence.

d. Special Tools, Test and Support Equipment —Section III. A list of special tools, test and support equipment authorized for the performance of maintenance at the organizational, direct support and general support level.

e. Federal Stock Number and Reference Number Index—Section IV. A list of Federal stock numbers in ascending numerical sequence, followed by a list of reference numbers in ascending alphanumeric sequence, cross-referenced to figure number and item number.

C–3. Explanation of Columns

The followin provides an explanation of columns in the tabular lists.

a. Source, Maintenance, and Recoverability Codes (SMR).

(1) *Source code.* Source codes are assigned to support items to indicate the manner of acquiring support items for maintenance, repair, or overhaul of end items. Source codes are entered in the first and second positions of the Uniform SMR Code format as follows:

Code	*Definition*
PA	Item procured and stocked for anticipated or known usage. Note: Items source coded PA without FSN are items furnished for which FSN's are being obtained or are not yet recorded in Army Master Data File (AMDF).
PB	Item procured and stocked for insurance purpose because essentiality dictates that a minimum quantity be available in the supply systems.
PC	Item procured and stocked and which otherwise would be coded PA except that it is deteriorative in nature.
PD	Support item, excluding support equipment, procured for initial issue or outfitting and stocked only for subsequent or additional initial issues or outfittings. Not subject to automatic replenishment.
PE	Support equipment procured and stocked for initial issue or outfitting to specified maintenance repair activities.
PF	Support equipment which will not be stocked but which will be centrally procured on demand.
PG	Item procured and stocked to provide for sustained support for the life of the equipment. It is applied to an item peculiar to the equipment which because of probable discontinuance or shutdown of production facilities would prove uneconomical to reproduce at a later time.
KD	An item of depot overhaul/repair kit and not purchased separately. Depot kit defined as a kit that provides items required at the time of overhaul or repair.
KF	An item of a maintenance kit and not purchased separately. Maintenance kit defined as a kit that provides an item that can be replaced at organizational or intermediate levels of maintenance.
KB	Item included in both a depot overhaul/repair kit and a maintenance kit.
MO	Item to be manufactured or fabricated at organizational level.

Code	Definition
MF	Item to be manufactured or fabricated at the direct support maintenance level.
MH	Item to be manufactured or fabricated at the general support maintenance level.
MD	Item to be manufactured or fabricated at depot maintenance level.
AO	Item to be assembled at organizational level.
AF	Item to be assembled at the direct support maintenance level.
AH	Item to be assembled at the general support maintenance level.
AD	Item to be assembled at depot maintenance level.
XA	Item is not procured or stocked because the requirements for the item will result in the replacement of the next higher assembly.
XB	Item is not procured or stocked. If not available through salvage, requisition.
XC	Installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturer's part number.
	A low-mortality item that is not stocked. When required, requisition the item from the end item manager with exception data, using the manufacturer's code and part number.

(2) *Maintenance code.* Maintenance codes are assigned to indicate the levels of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the Uniform SMR Code format as follows:

USE (THIRD POSITION): The maintenance code entered in the third position will indicate the lowest maintenance level authorized to remove, replace, and use the support item. The maintenance code entered in the third position will indicate one of the following levels of maintenance.

Code	Application/Explanation
C	Crew or operator maintenance performed within organizational maintenance.
O	Support item is removed, replaced, used at the organizational level.
F	Support item is removed, replaced, used at the direct support level.
H	Support item is removed, replaced, used at the general support level.
D	Support items that are removed, replaced, used at Depot, Mobile Depot, Specialized Repair activity only.

REPAIR (FOURTH POSITION): The maintenance code entered in the fourth position indicates whether the item is to be repaired and identifies the lowest maintenance level with the capability to perform complete repair (i.e., all authorized maintenance functions). This position will contain one of the following maintenance codes as assigned by the service(s) that require the code:

Code	Application/Explanation
O	The lowest maintenance level capable of complete repair of the support item is the organization level.
F	The lowest maintenance level capable of complete repair of the support item is the direct support level.
H	The lowest maintenance level capable of complete repair of the support item is the general support level.
D	The lowest maintenance level capable of complete repair of the support item is the depot level, performed by (enter applicable activity) Depot, Mobile Depot or Specialized Repair Activity.
L	Repair restricted to designated Specialized Repair Activity.
Z	Nonrepairable. No repair is authorized.
B	No repair is authorized. The item may be reconditioned by adjusting, lubricating, etc., at the user level. No parts or special tools are procured for the maintenance of this item.

(3) *Recoverability code.* Recoverability codes are assigned to support items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the Uniform SMR Code format as follows:

Recoverability codes	Definition
Z	Nonreparable item. When unserviceable, condemn and dispose at the level indicated in position 3.
O	Reparable item. When uneconomically reparable, condemn and dispose at organizational level.
F	Reparable item. When uneconomically reparable condemn and dispose at the direct support level.
H	Reparable item. When uneconomically reparable, condemn and dispose at the general support level.
D	Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal not authorized below depot level.
L	Reparable item. Repair, condemnation and disposal not authorized below depot/Specialized Repair Activity level.
A	Item requires special handling or condemnation procedures because of specific reasons (i.e., precious metal content, high dollar value, critical material or hazardous material). Refer to appropriate manuals/directives for specific instructions.

b. Federal Stock Number. Indicates the Federal Stock Number assigned to the item and will be used for requisitioning purposes.

c. Description. Indicates the Federal item name and any additional description of the item required. The last line indicates the reference number followed by the applicable Federal Supply Codes for Manufacturer (FSCM) in parentheses. The FSCM is used as an element in item identification to designate manufacturer or distributor or

Government agency, etc., and is identified in SB 708–42.

d. Unit of Measure (U/M). Indicates the standard or basic quantity by which the listed item is used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation, e.g., ea, in, pr, etc., and is the basis used to indicate quantities and allowances in subsequent columns. When the unit of measure differs from the unit of issue, the lowest unit of issue that will satisfy the required units of measure will be requisitioned.

e. Quantity Furnished with Equipment (Basic Issue Items Only). Indicates the quantity of the item funished with the equipment.

f. Quantity Incorporated in Unit. Indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that no specific quantity is applicable, e.g., shims, spacers, etc.

g. 15-Day Organizational Maintenance Allowances.

(1) Repair parts allowances reflected in Column 6 represent repair parts used at the organizational category of maintenance and will be requisitioned on an "as required" basis until stockage is based on demand in accordance with AR 735–35.

(2) Major Army commanders are authorized to approve reductions in the range of support items authorized for use in units within their commands. Recommendations for increases in range of items authorized for use will be forwarded to Commander, US Army Tank-Automotive Command, ATTN: AMSTA–M(NMP), Warren, MI 48090.

(3) The allowance quantities for Special Tools or Test and Support Equipment peculiar to the item are shown in the appropriate density spread/allowance columns.

h. 30-Day DS/GS Maintenance Allowances, Columns 7 and 8.

(1) The Repair Parts List includes asterisk entries in separate columns—one for Direct Support (DS) and one for General Support (GS)—as appropriate to indicate the total range of repair parts authorized for use at that category or required to be removed or disassembled during the performance of authorized maintenance operations. They will be requisitioned initially on an "as required" basis. The repair parts authorized at the DS/GS levels will be those authorized for the maintenance mission at these levels. Requirement for repair parts stockage and for distribution to supported units will be based on demand and determined in accordance with AR 710–2.

(2) Special tools, test and support equipment —peculiar to an item are listed with quantities in the appropriate density spread/allowance columns.

i. 1-Year Allowances Per 100 Equipments/ Contingency Planning Purposes. Indicates opposite the first appearance of each item the total quantity required for distribution and contingency planning purposes. The range of items indicates total quantities of all authorized items required to provide for adequate support of 100 equipments for one year.

j. Illustration. This column is divided as follows:

(1) *Figure number.* Indicates the figure number of the illustration on which the item is shown.

(2) *Item number.* Indicates the call out number usde to reference the item in the illustration.

C–4. Special Information

a. Repair parts mortality has been based on (unavailable).

b. The basis of issue for authorized special tools, test and support equipment is the number of end items of equipment supported and the number of maintenance personnel allocated to perform the required maintenance operations.

c. Detailed manufacture instructions for items source coded "M" are found in the maintenance portion of the manual.

d. Action Change Codes have been omitted due to the extensive changes to the RPSTL data.

e. Detailed assembly instructions for items source coded "A" are found in the maintenance portion of this manual. Assembly components are listed immediately following the item to be assembled.

f. Parts which require manufacture or assembly at a category higher than that authorized for installation will indicate in the source column the higher category (*e.g.*, FM, AF, MH).

g. Repair parts kits appear as the last entries in the repair parts listing for the group or assembly to which they apply.

h. Identification of Useable on Codes of the publication are—

Code	*Used on*
BB	M390
BC	M390C
BD	M514
BE	M545

C–5. How to Locate Repair Parts

a. When Federal stock number or Reference number is unknown:

(1) *First.* Using the table of contents, determine the functional group or functional subgroup within which the repair part belongs. This is necessary since illustrations are prepared for functional groups or functional subgroups and listings are divided into the same groups.

(2) *Second.* Find the illustration covering the functional group or functional subgroup to which the repair part belongs.

(3) *Third.* Identify the repair part on the illustration and not the illustration figure and item number of the repair part.

(4) *Fourth.* Using the repair parts listing, find the functional group or functional subgroup to which the repair part belongs and locate the illustration figure and item number noted on the illustration.

b. When Federal stock number or Reference number is known:

(1) *First.* Using the index of Federal stock numbers and Reference numbers find the pertinent Federal stock number or Reference number. This index is in ascending alphanumeric sequence, cross-referenced to the illustration figure number and item number.

(2) *Second.* Using the repair parts listing, find the functional group or functional subgroup of the repair part and illustration figure number and item number reference in the Index of Federal Stock Numbers and Reference Numbers.

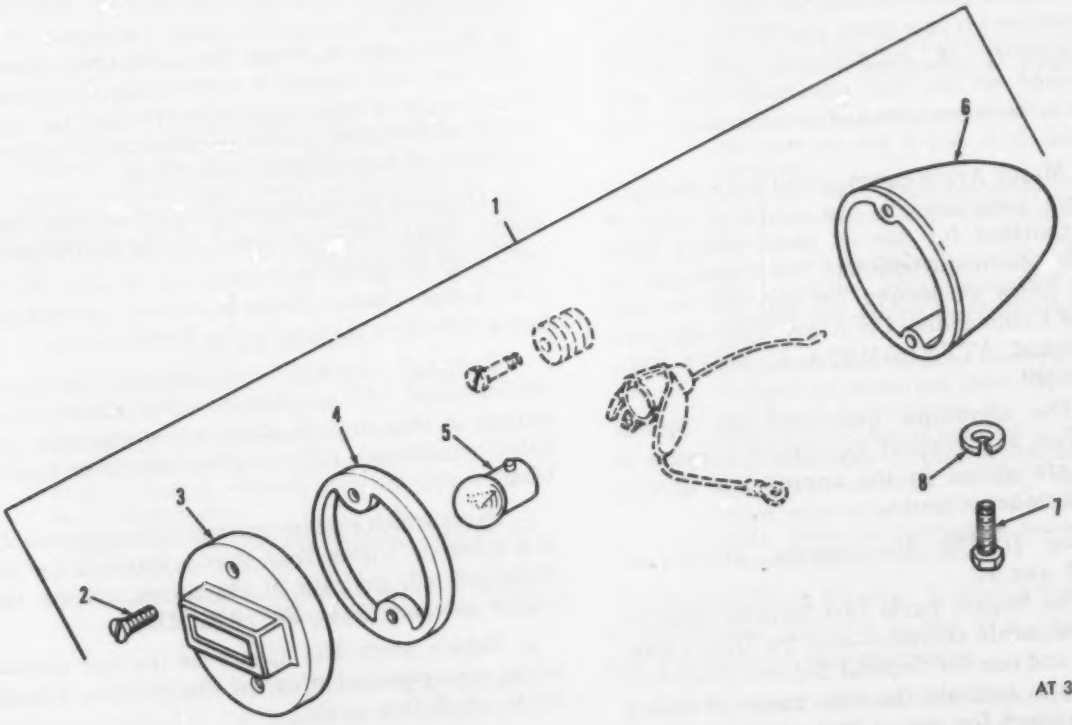


Figure C–1. Blackout stoplight assembly.

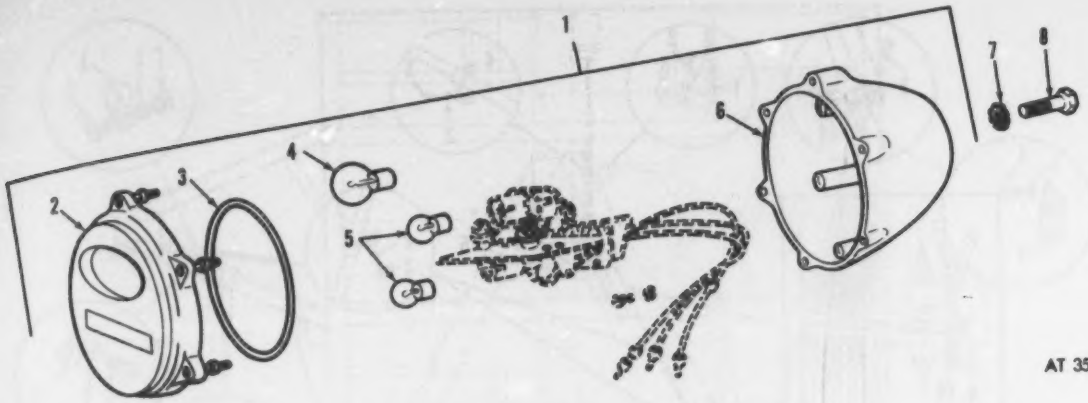


Figure C–2. Taillight stoplight assembly.

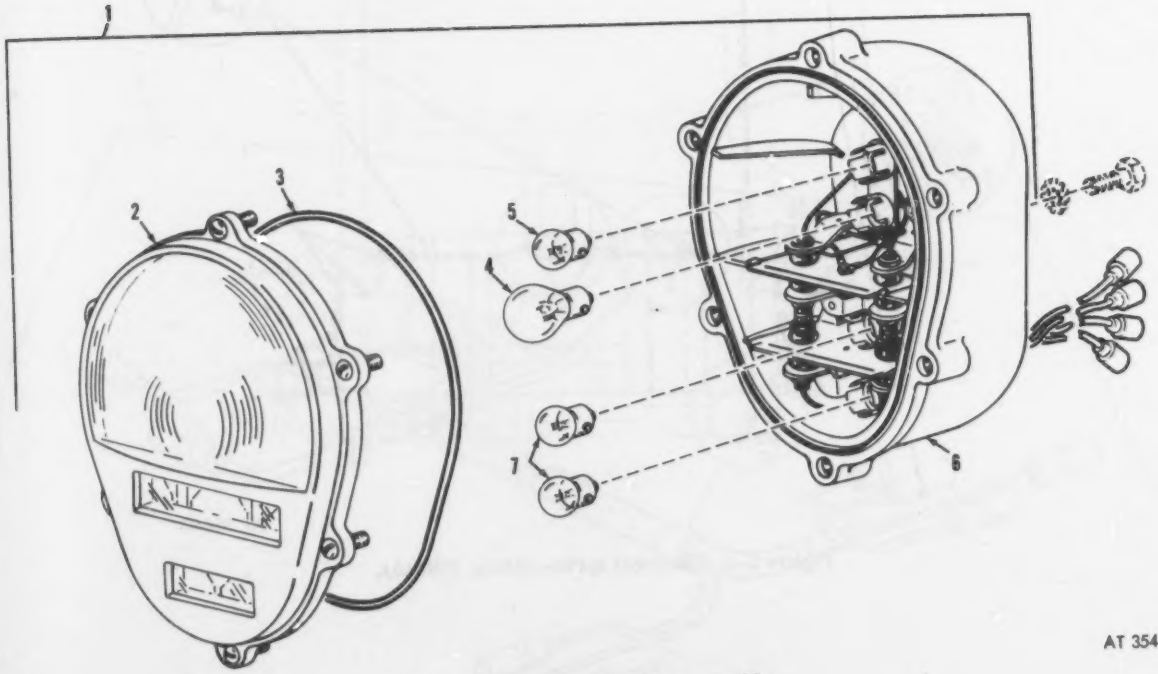


Figure C–3. Composite light assembly.

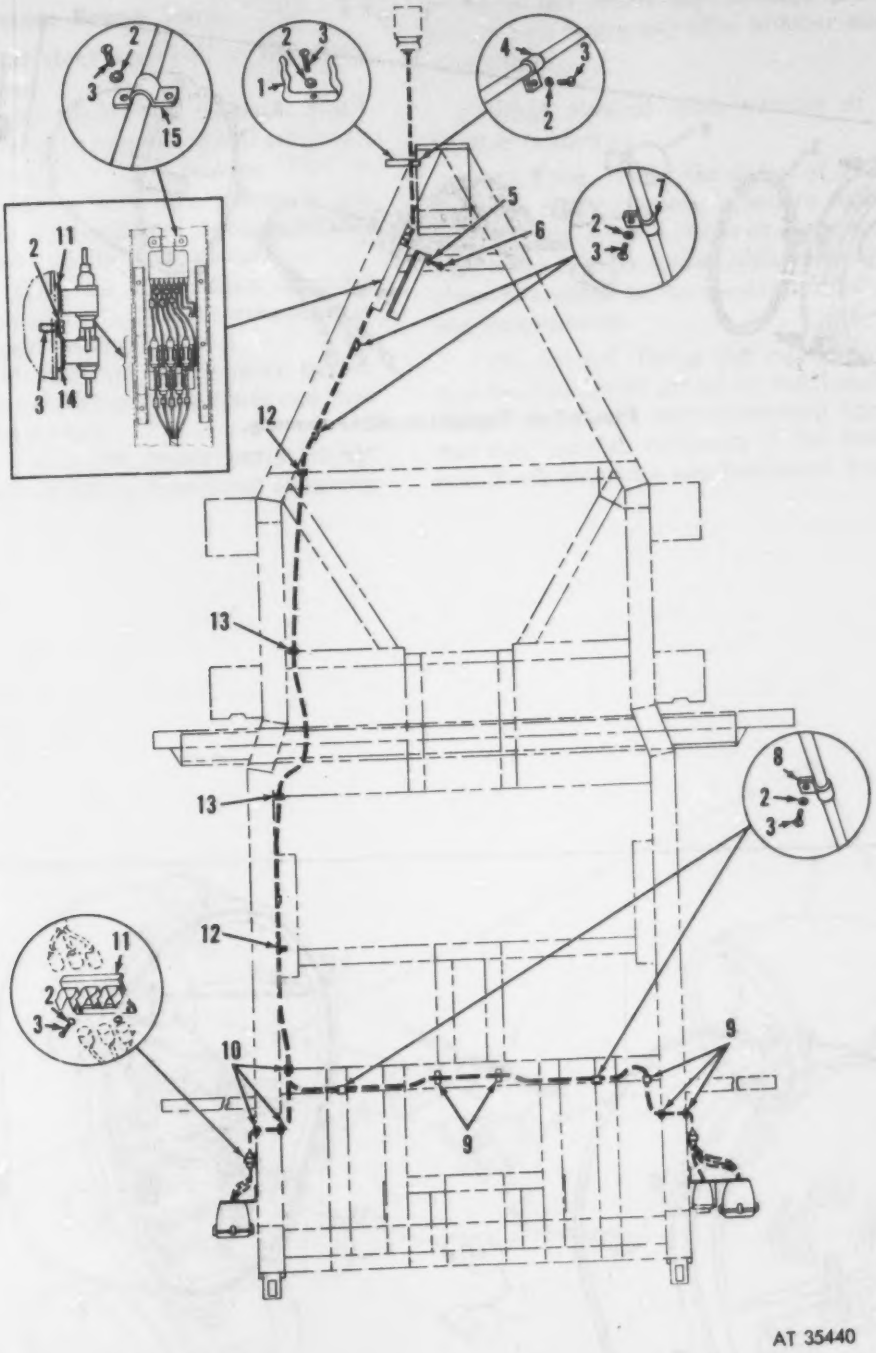


Figure C–4. Electrical system (M514, XM545).

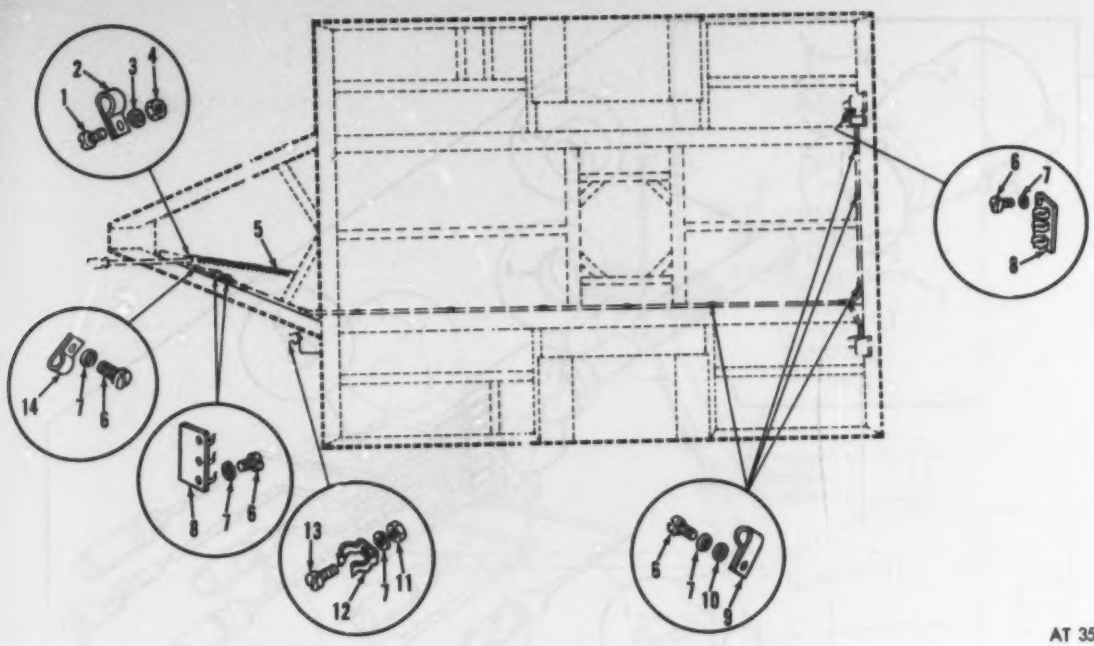


Figure C–5. Electrical system (M390, M390C).

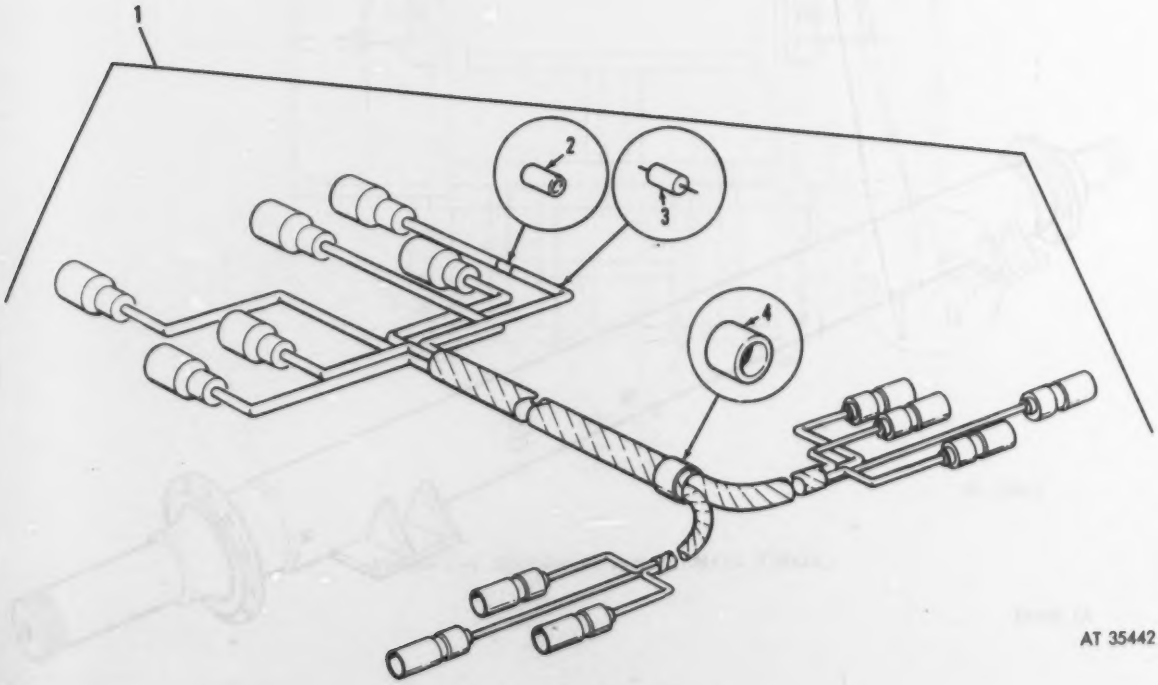


Figure C–6. Wiring harness.

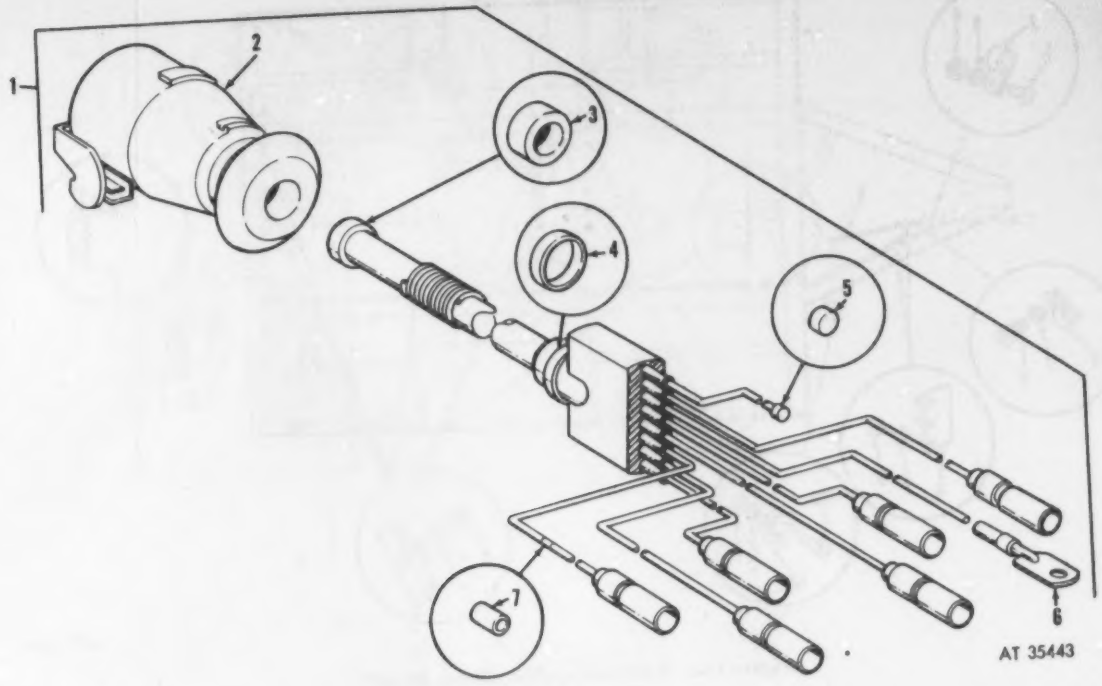


Figure C–7. Intervehicular cable assembly.

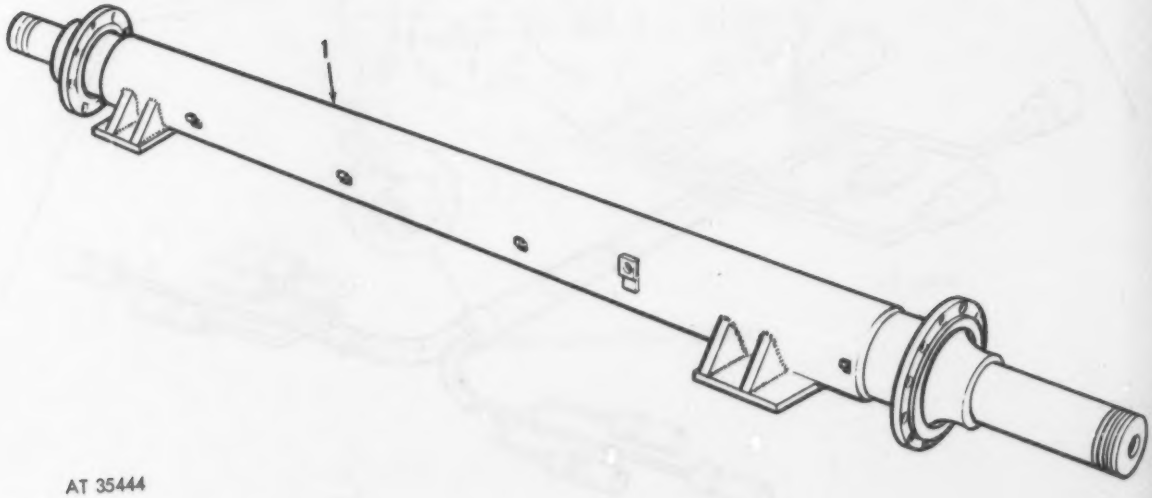


Figure C–8. Rear axle.

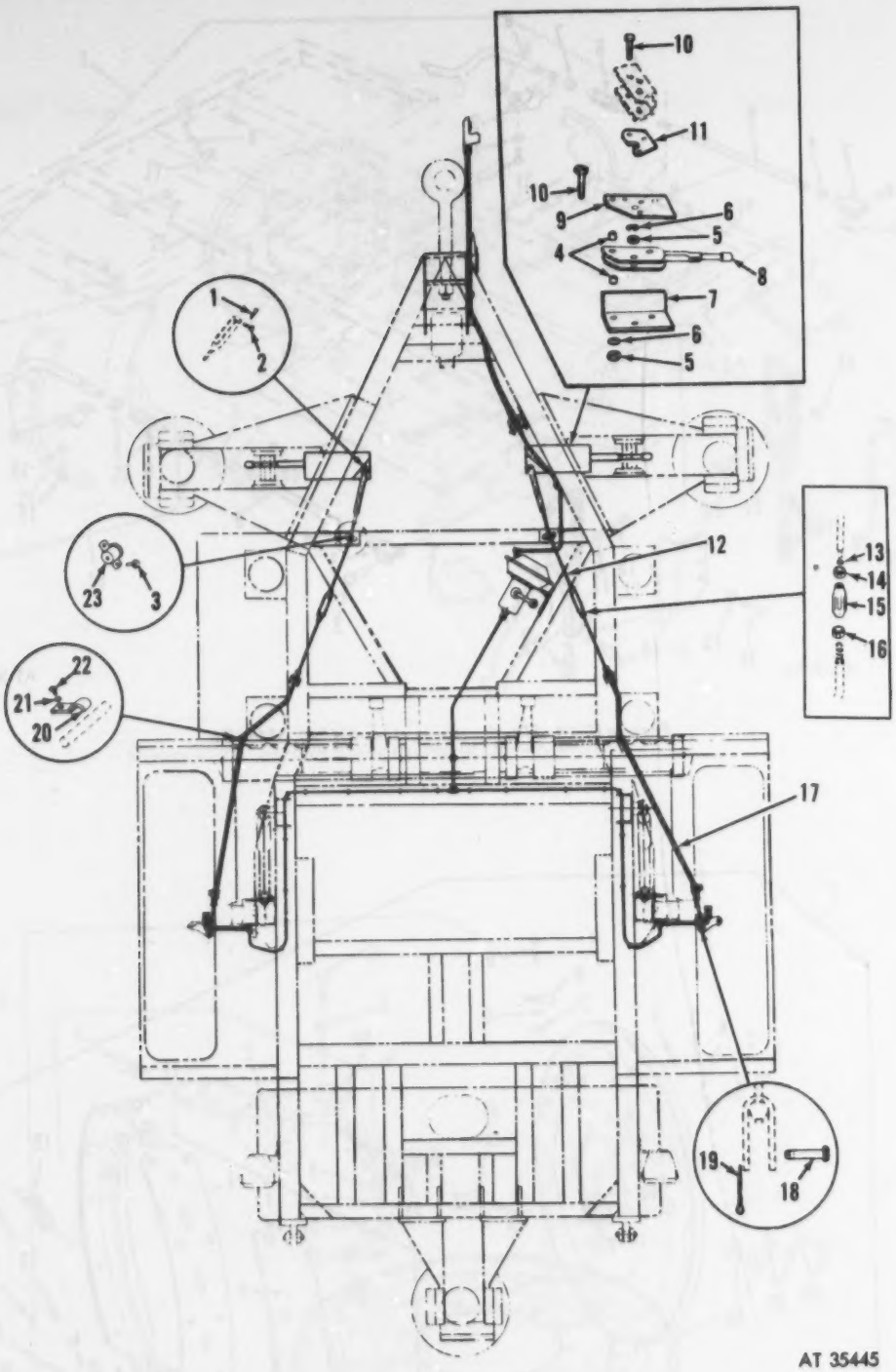


Figure C–9. Handbrake system (M514, XM545).

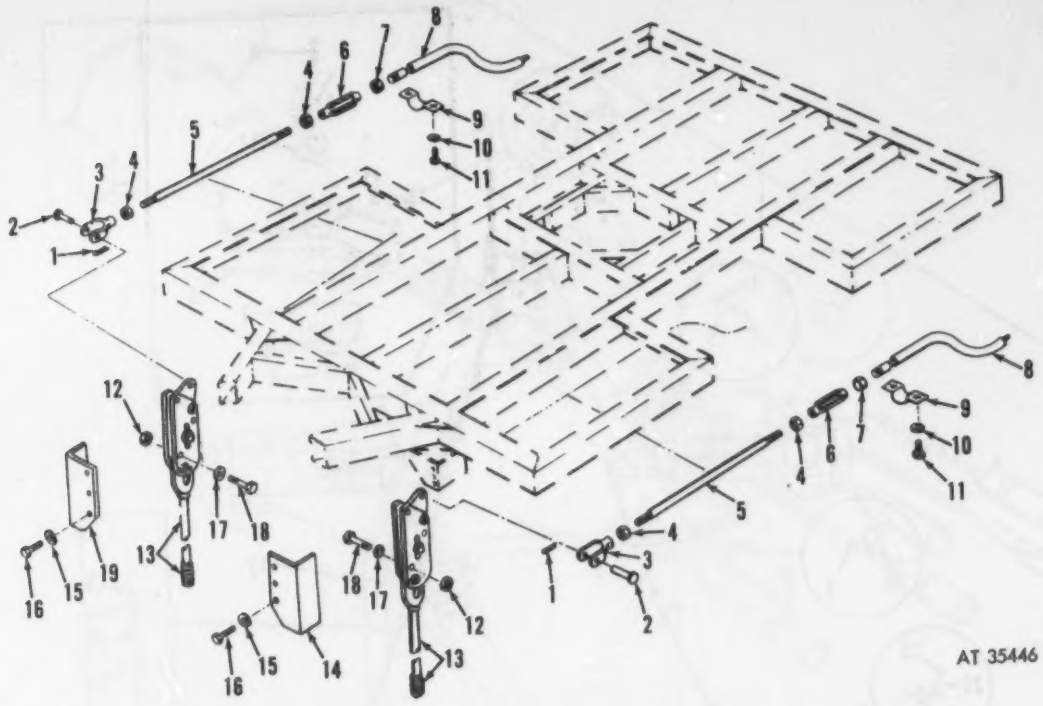


Figure C–10. Handbrake system (M390, M390C).

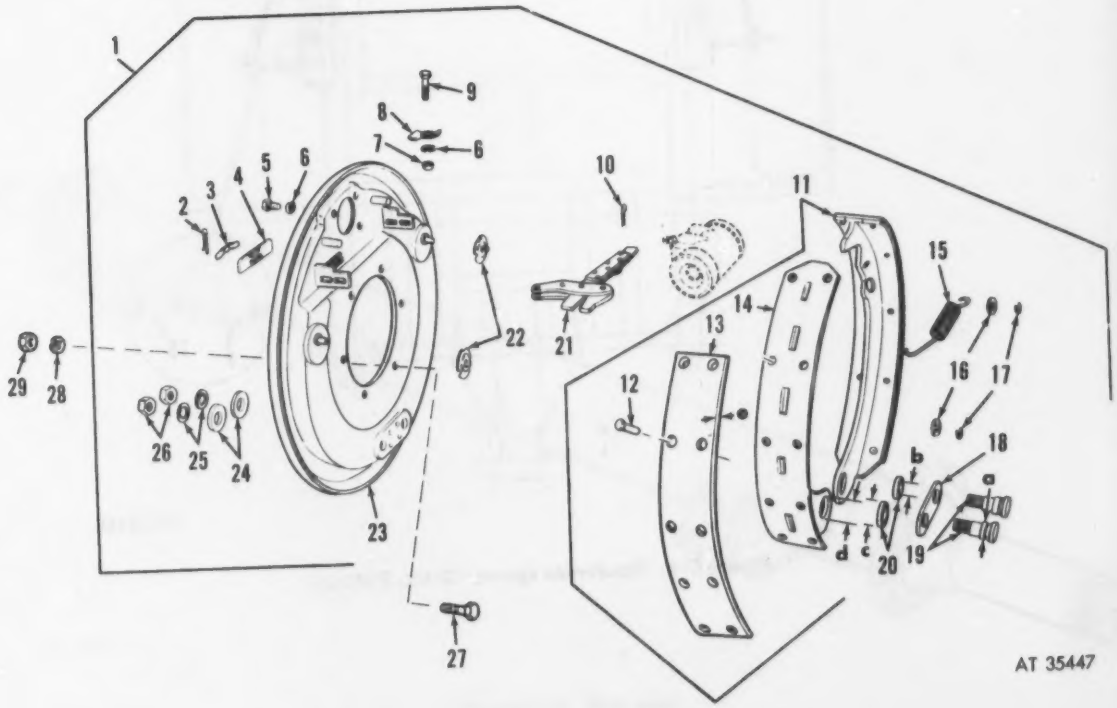


Figure C–11. Service brake assembly (M514, XM545).

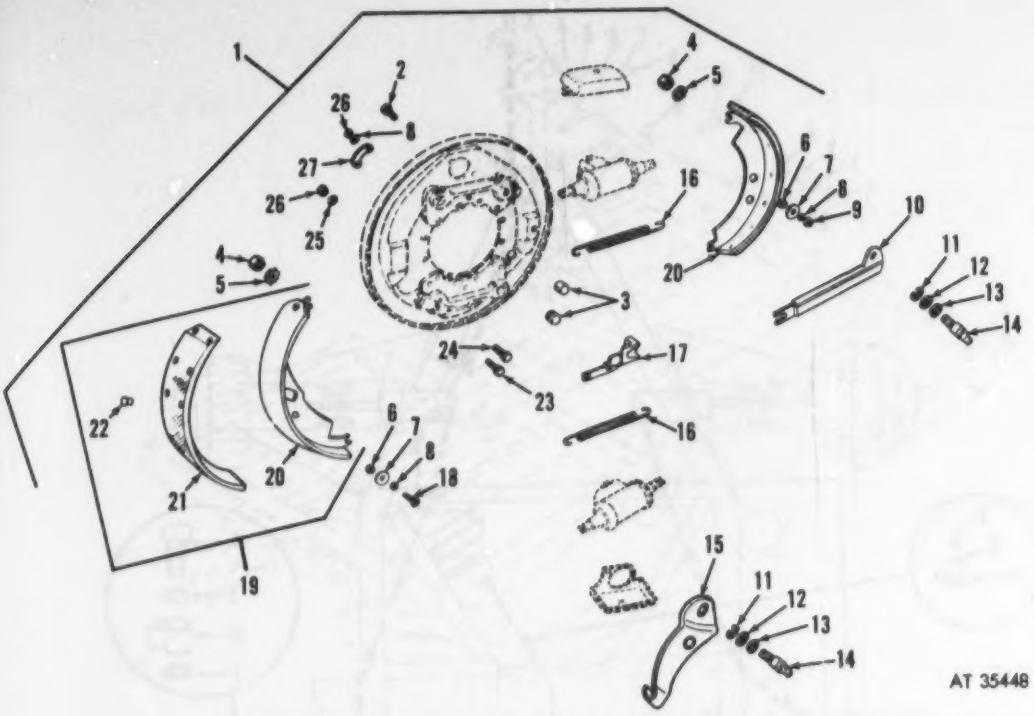


Figure C–12. Service brake assembly (M390, M390C).

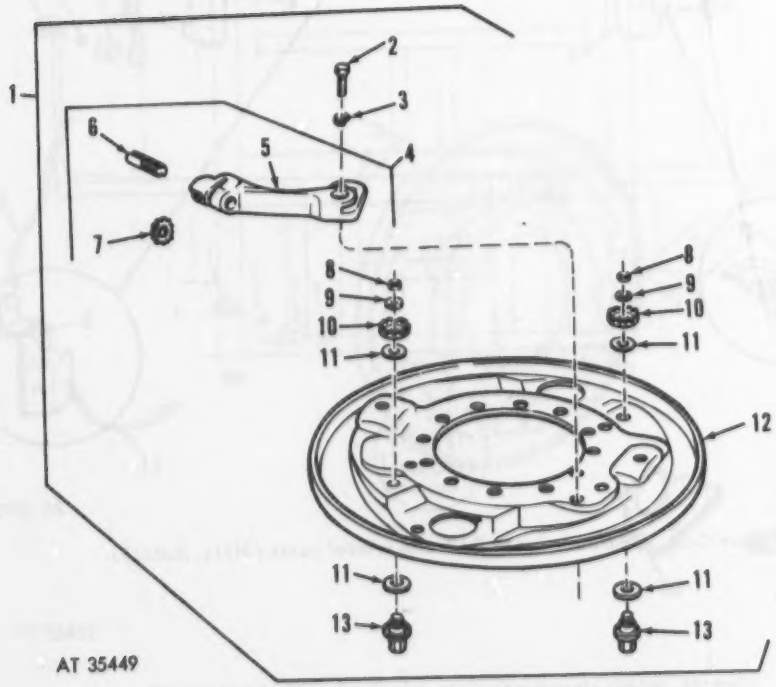


Figure C–13. Backing plate assembly (M390, M390C).

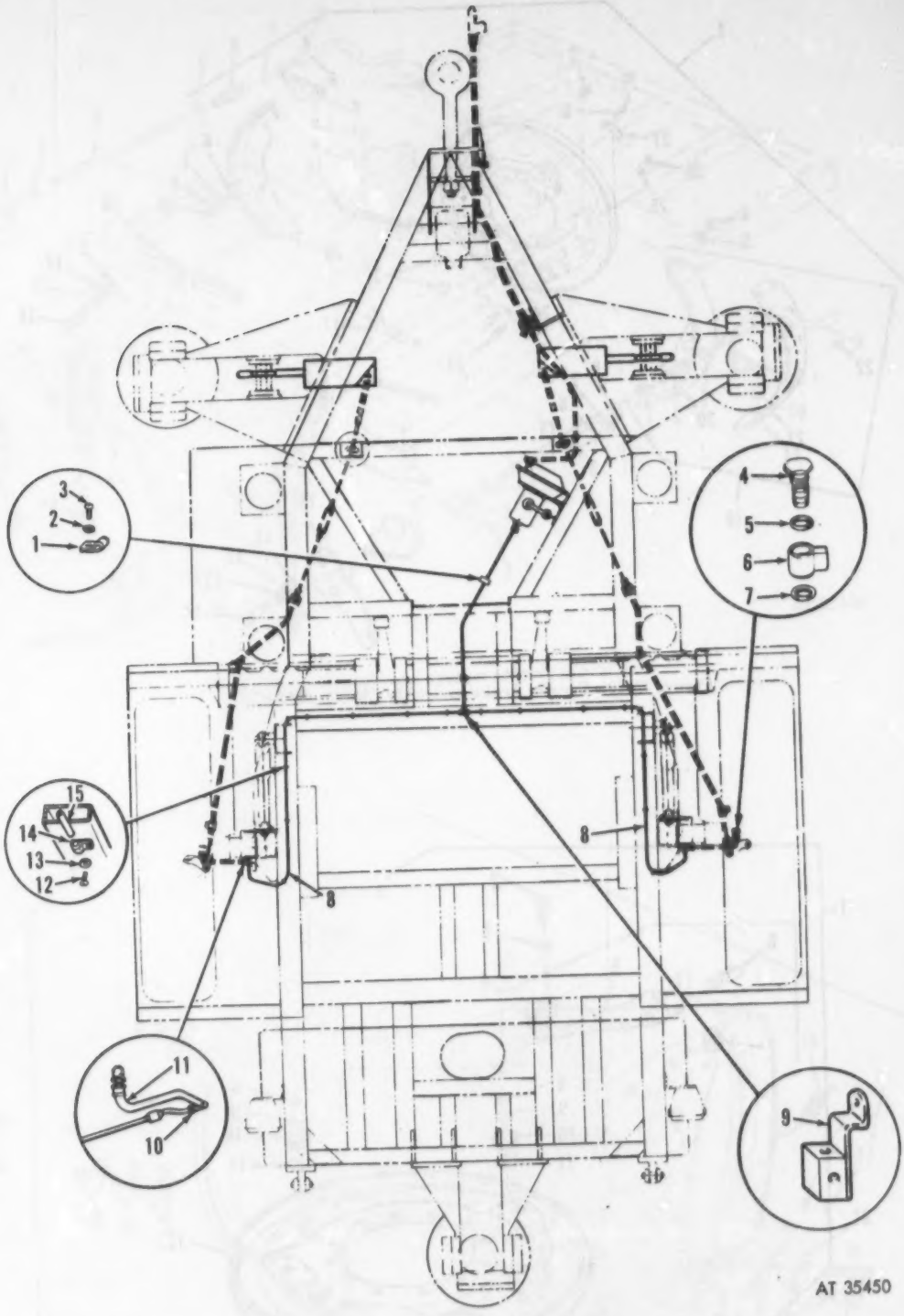


Figure C-14. Hydraulic brake lines and related parts (M514, XM545).

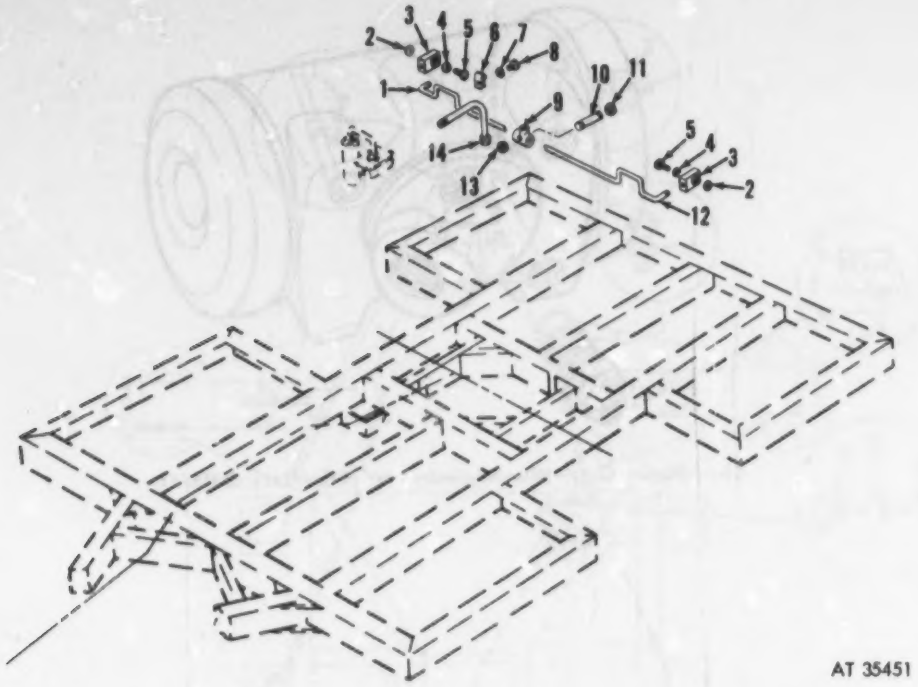


Figure C–15. Hydraulic brake lines and related parts (M390, M390C).

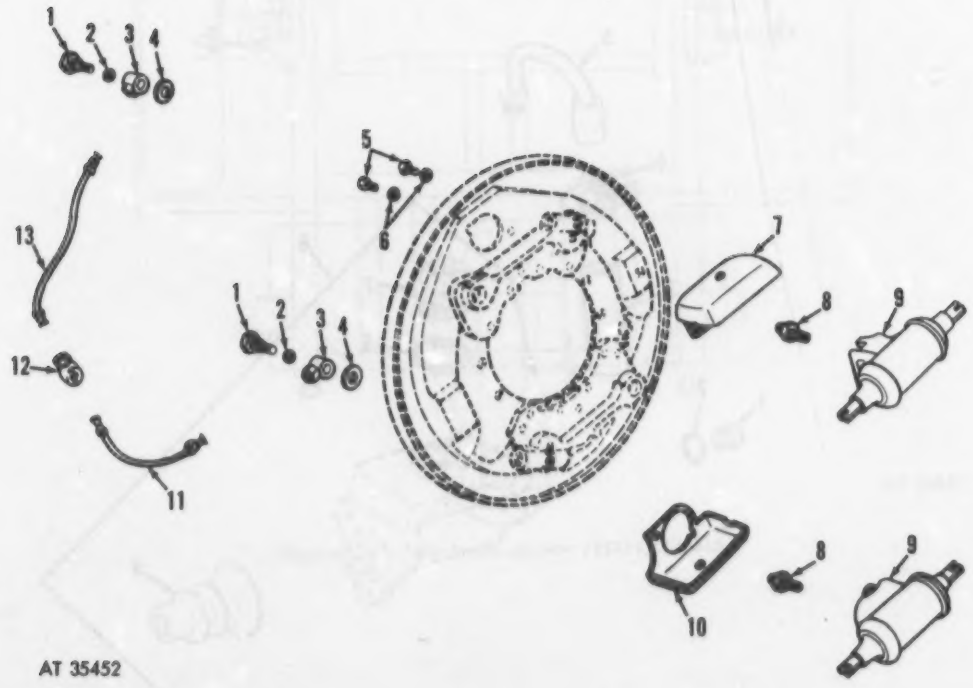


Figure C–16. Wheel cylinder and related parts (M390, M390C).

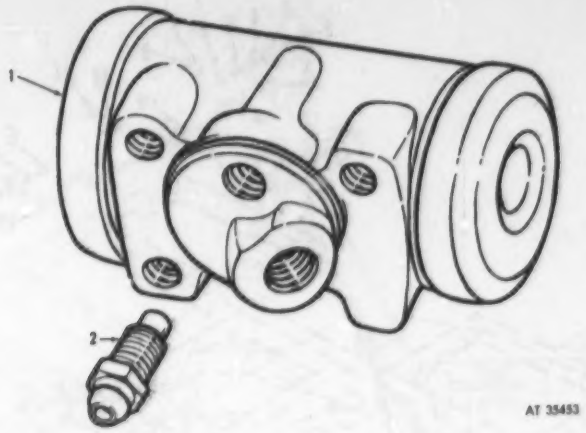


Figure C–17. Wheel cylinder assembly (M514, XM545).

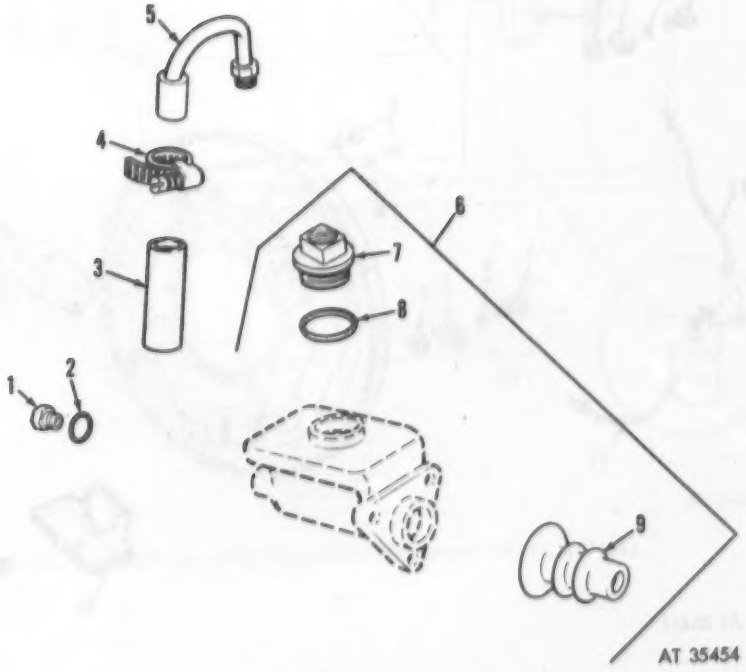


Figure C–18. Master cylinder and related parts.

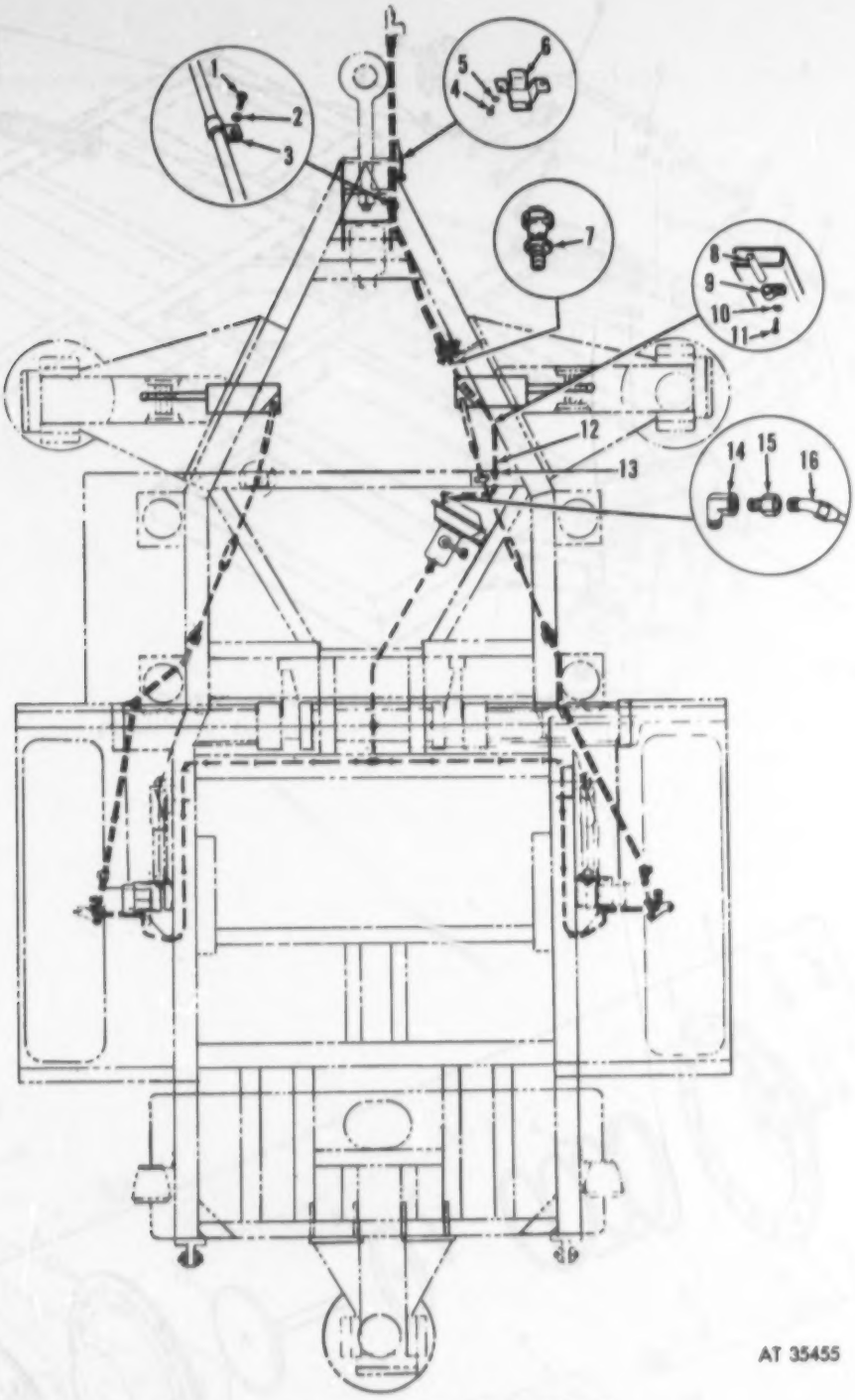


Figure C–19. Air brake system (M514, XM545).

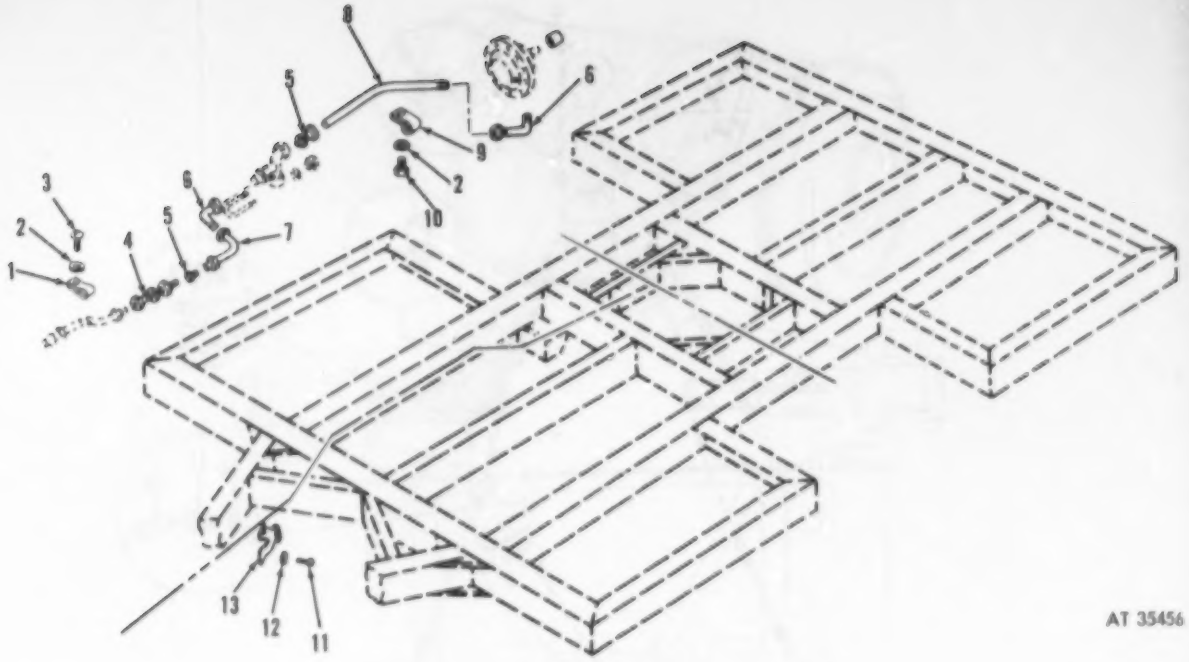


Figure C–20. Air brake system (M390, M390C).

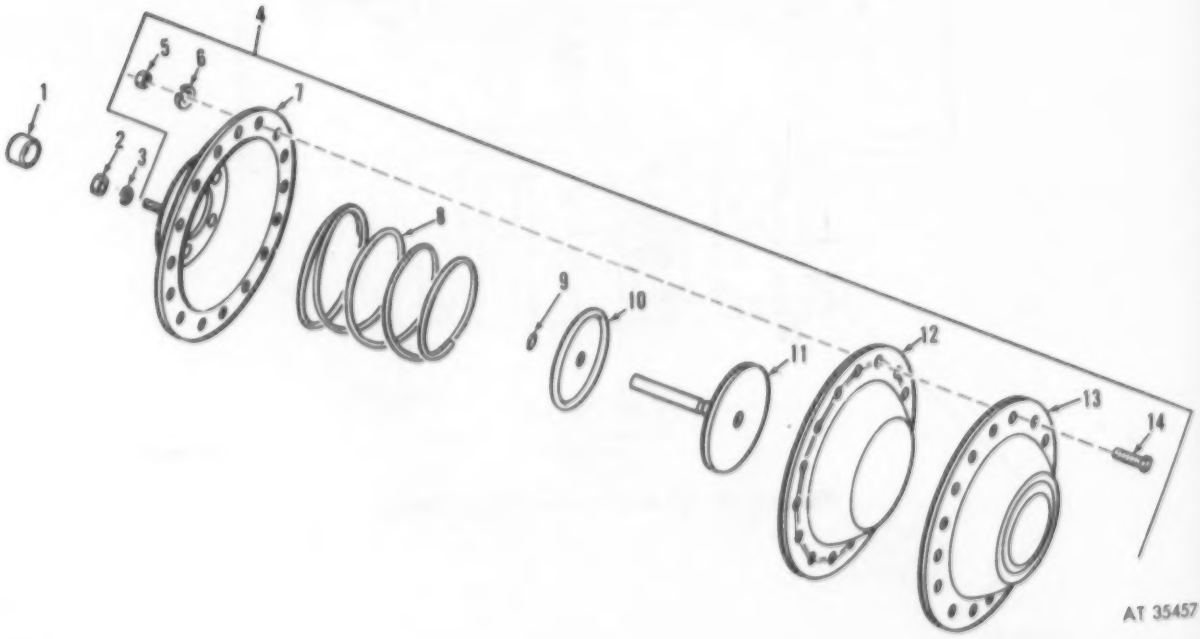


Figure C–21. Air chamber assembly.

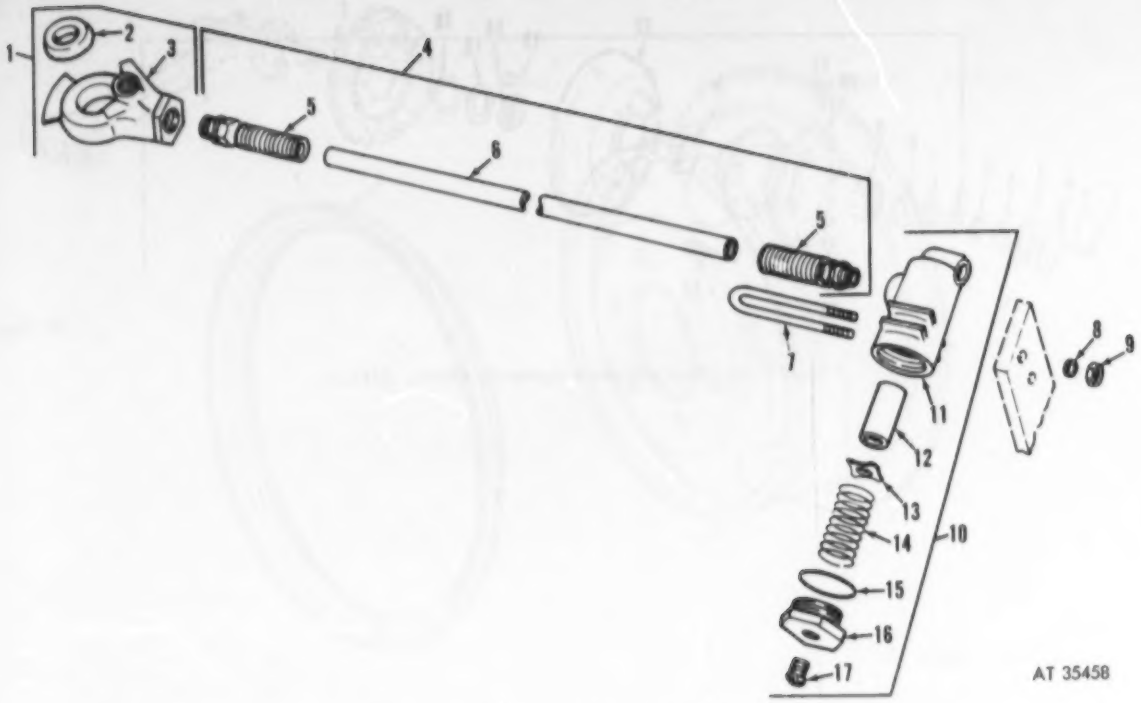


Figure C–22. Intervehicular hose and air filter assembly.

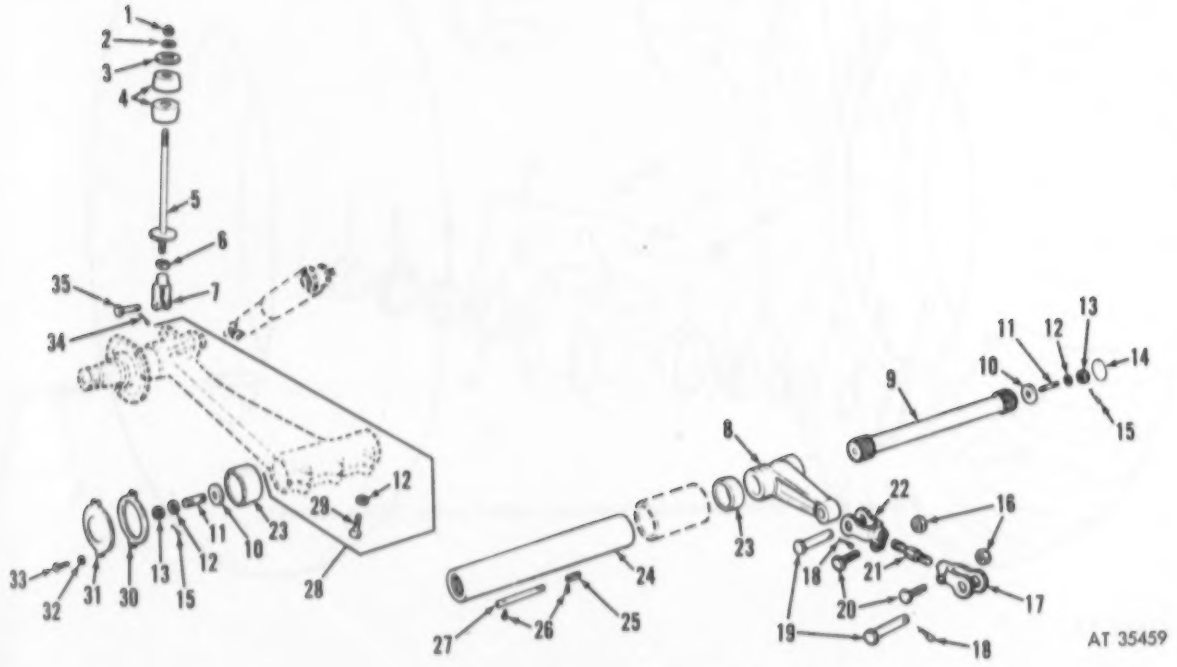


Figure C–23. Suspension system (M514, XM545).

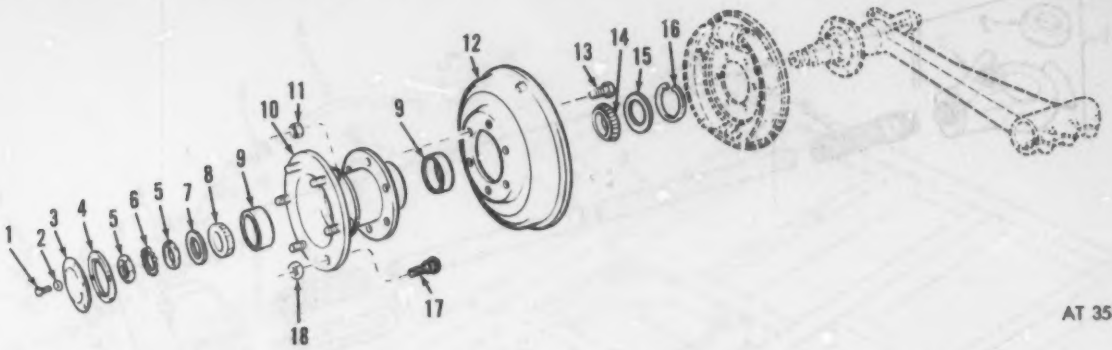


Figure C–24. Hub and drum assembly (M514, XM545).

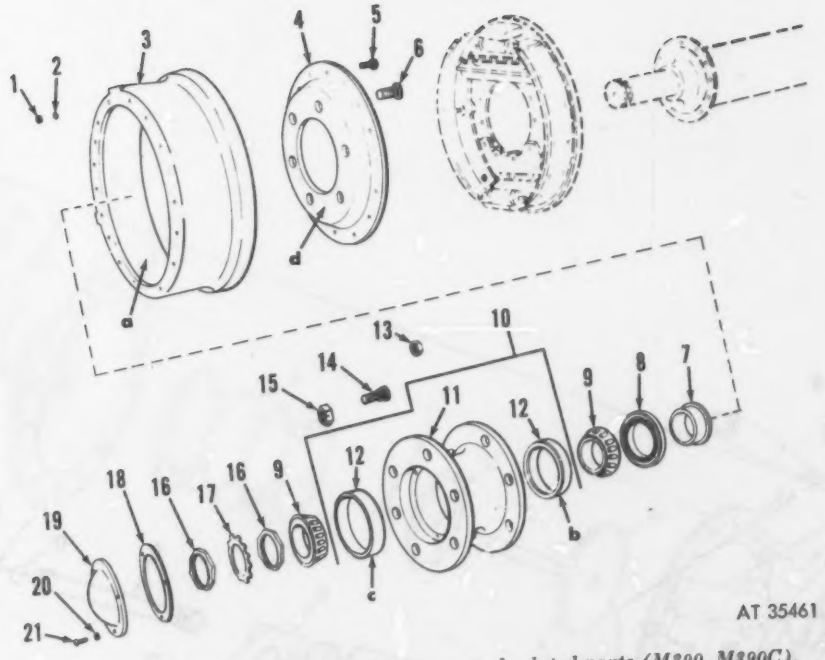
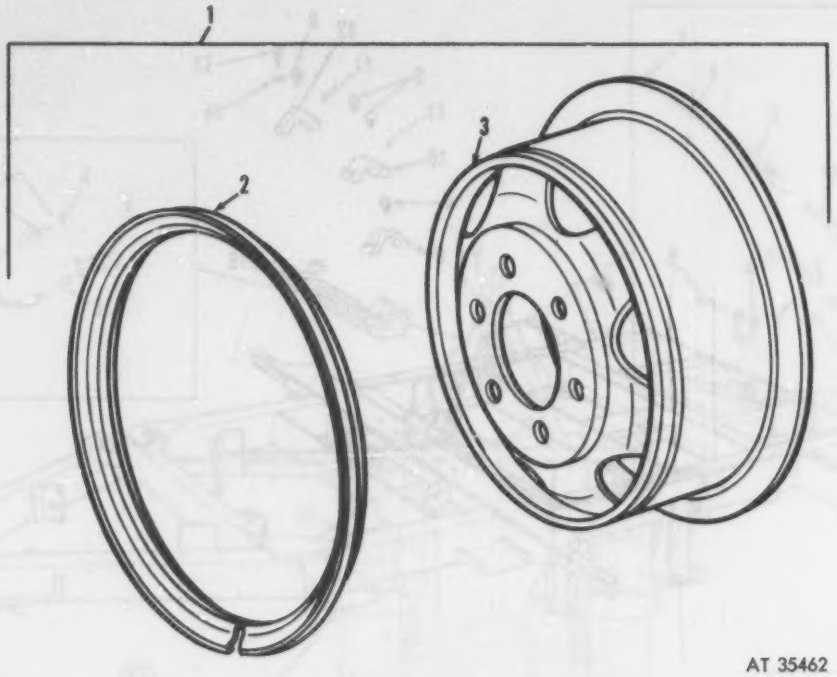


Figure C–25. Hub assembly, drum and related parts (M390, M390C).



AT 35462

Figure C–26. Wheel and rim assembly.

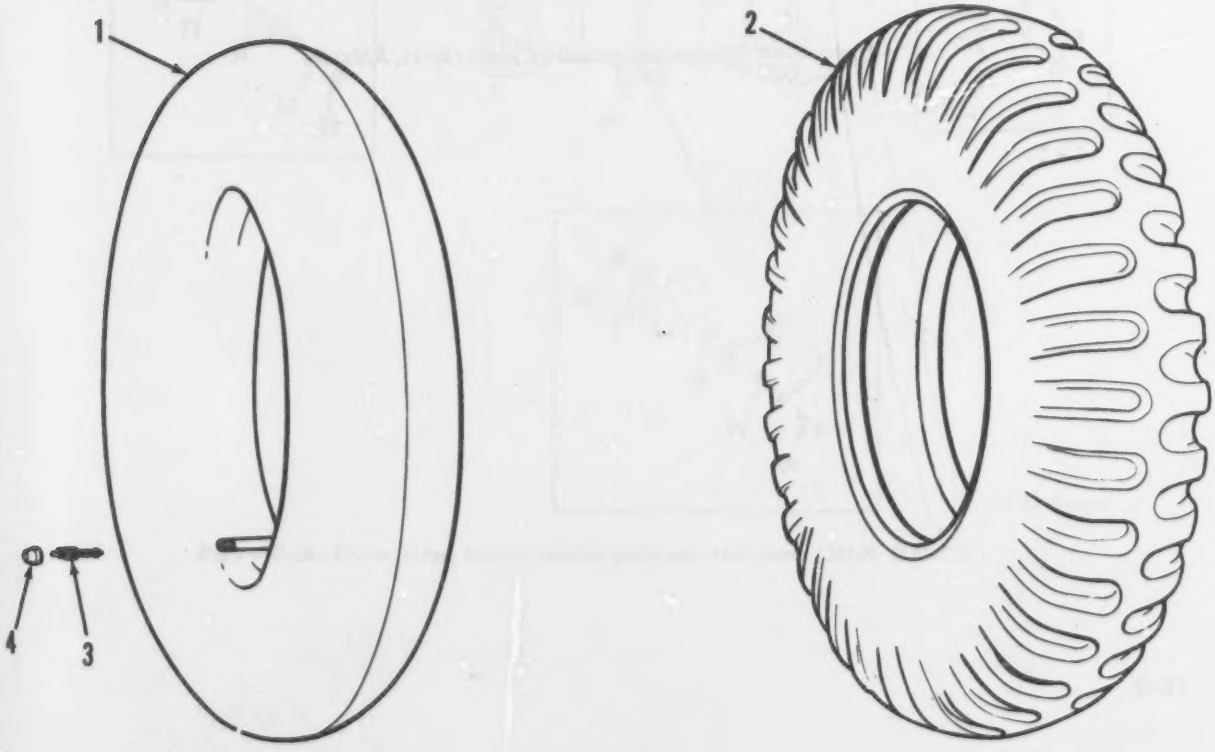


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Figure C–27. Tires and tubes.

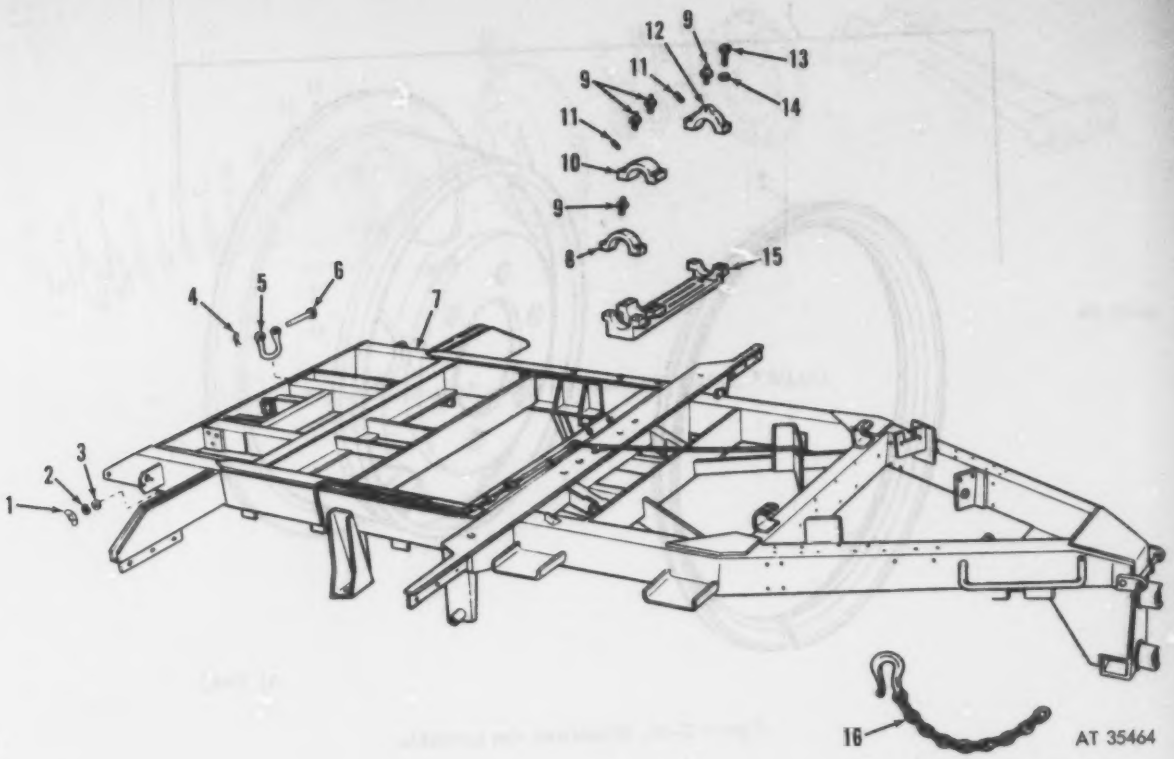

Figure C–28. Shackle and associated parts (M514, XM545).

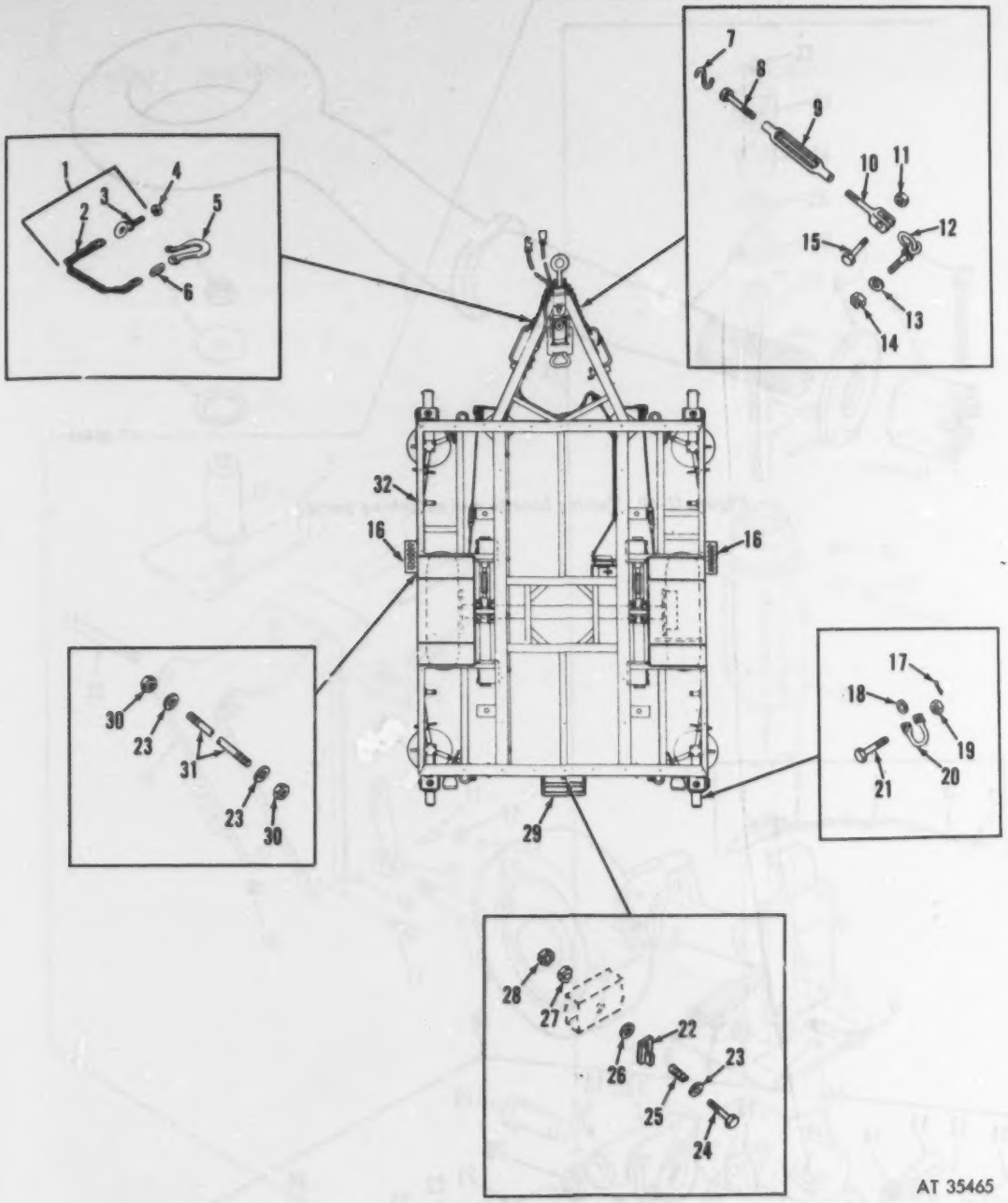

Figure C–29. Chain, steps, ladder, shackle and associated parts (M890, M890C).

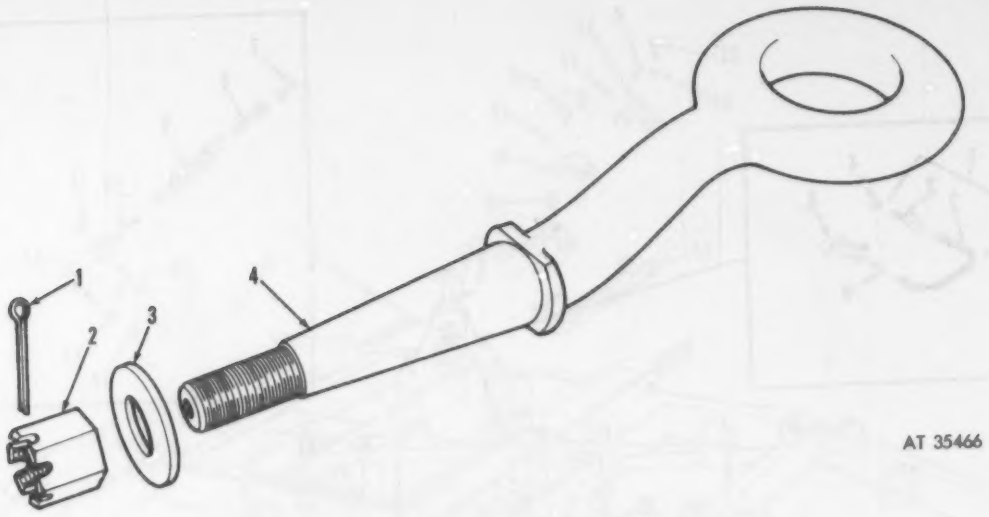

Figure C–30. Towing lunette and attaching parts.

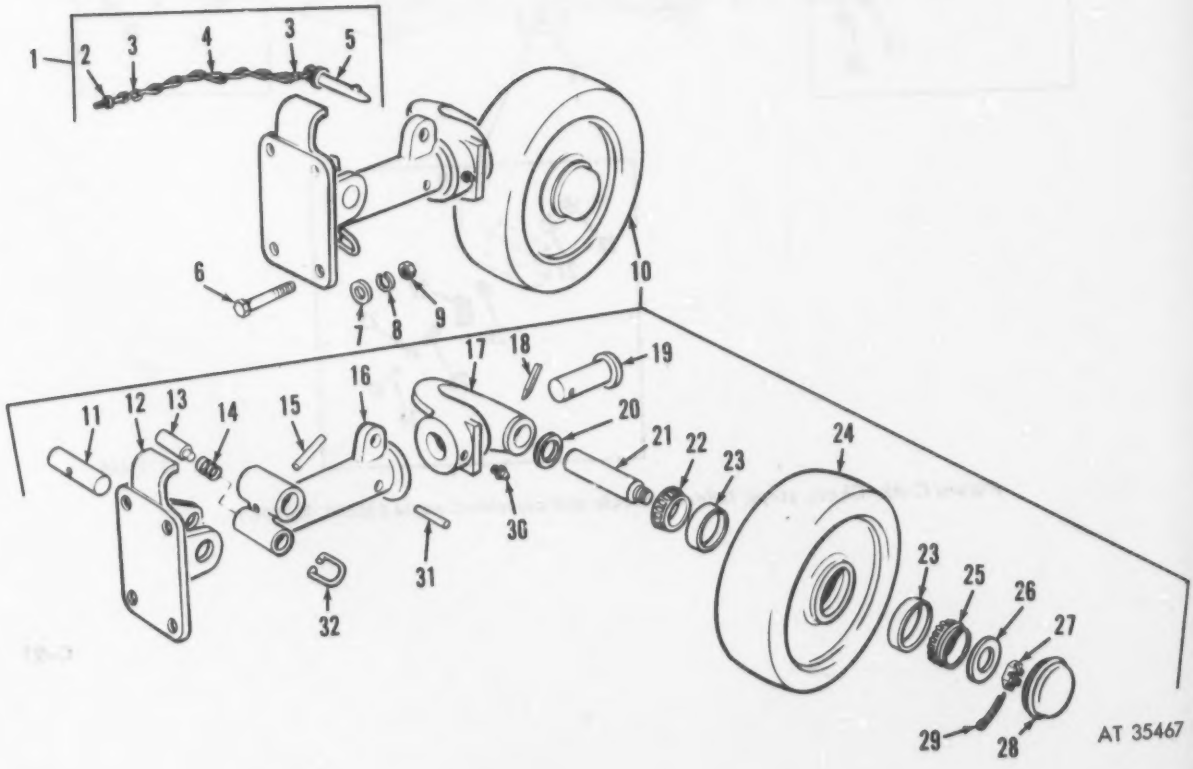

Figure C–31. Landing gear support assembly (M514, XM545).

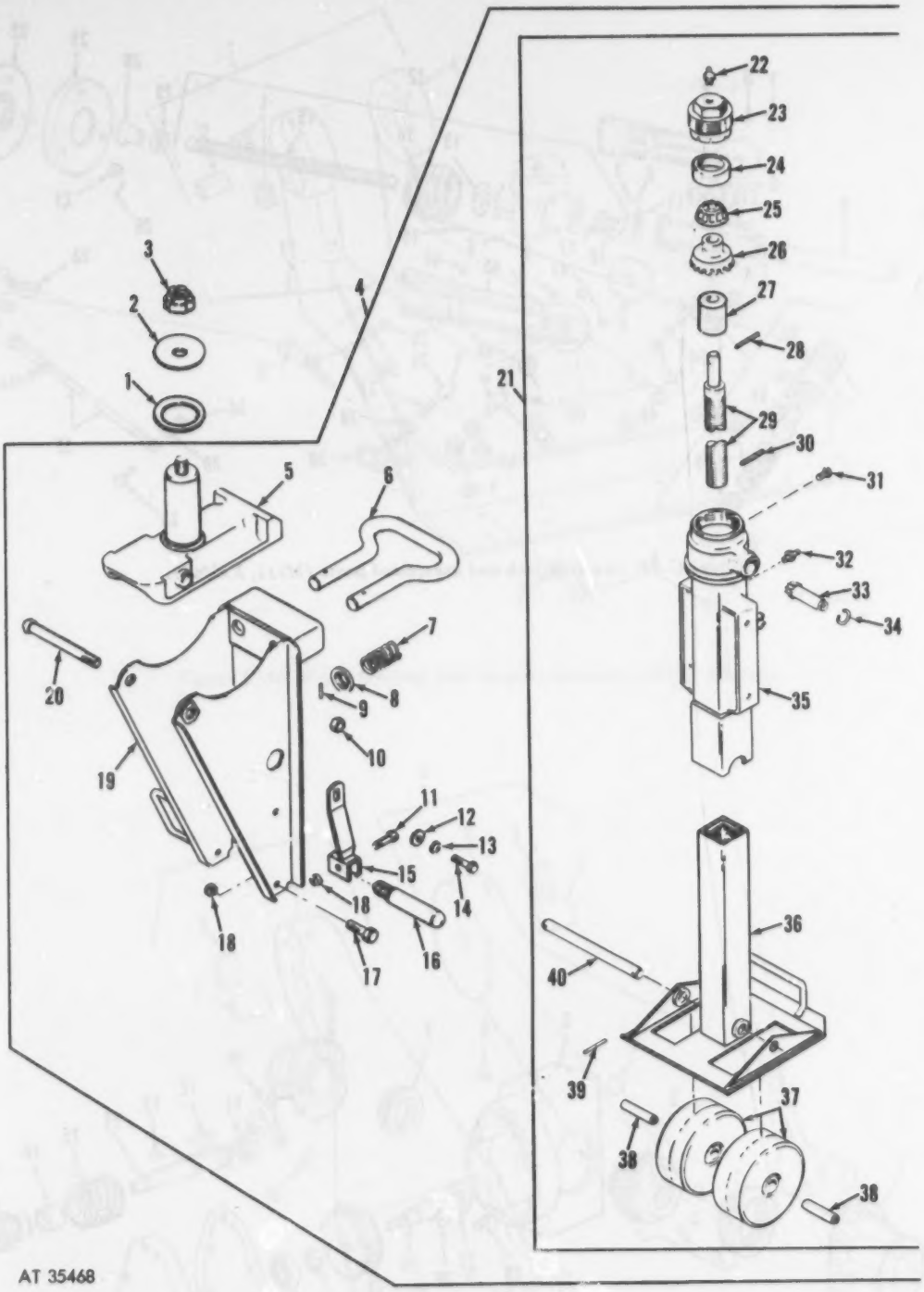

Figure C–22. Retractable support assembly (M390, M390C).

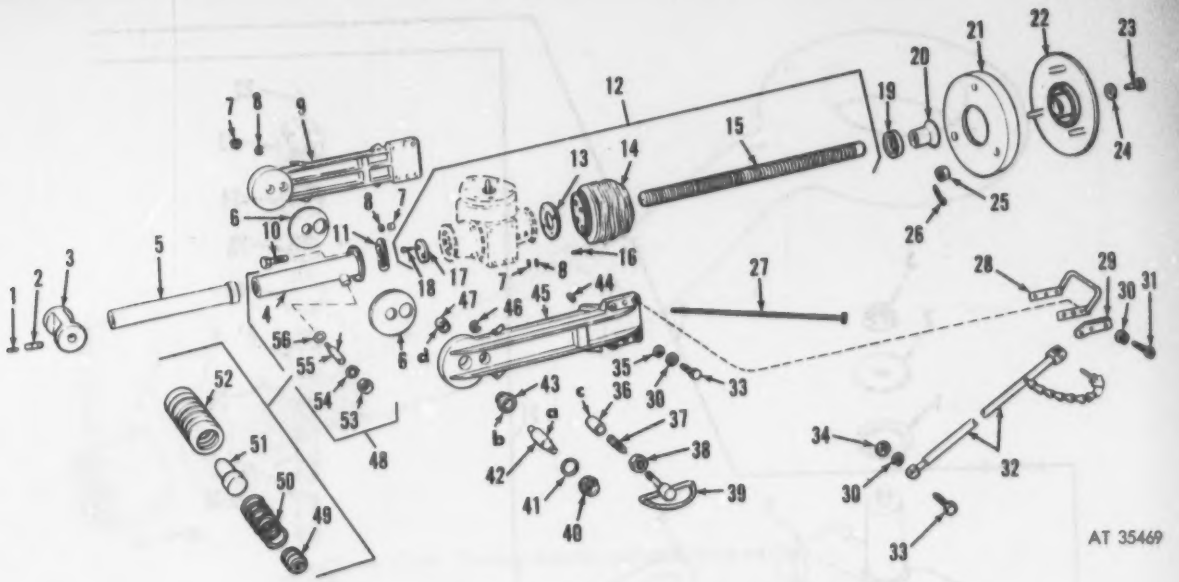

Figure C–33. Leveling jack and associated parts (M514, XM545).

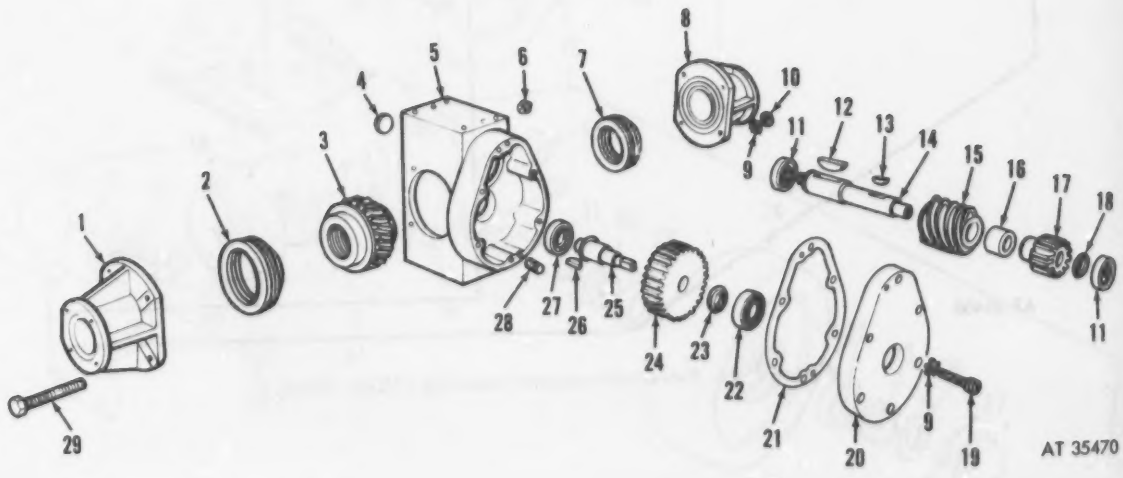

Figure C–34. Leveling jack gear box (M514, XM545).

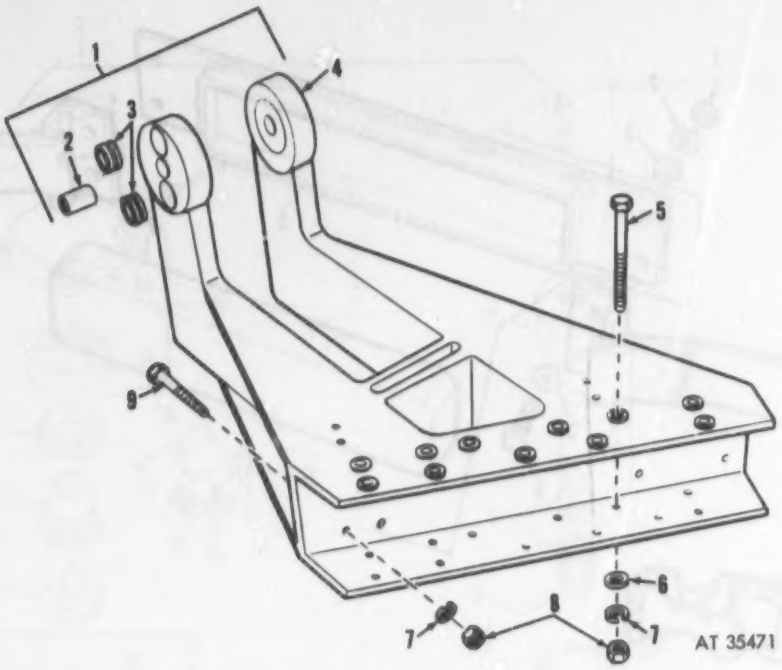

Figure C–35. Front leveling jack support assembly (M514, XM545).

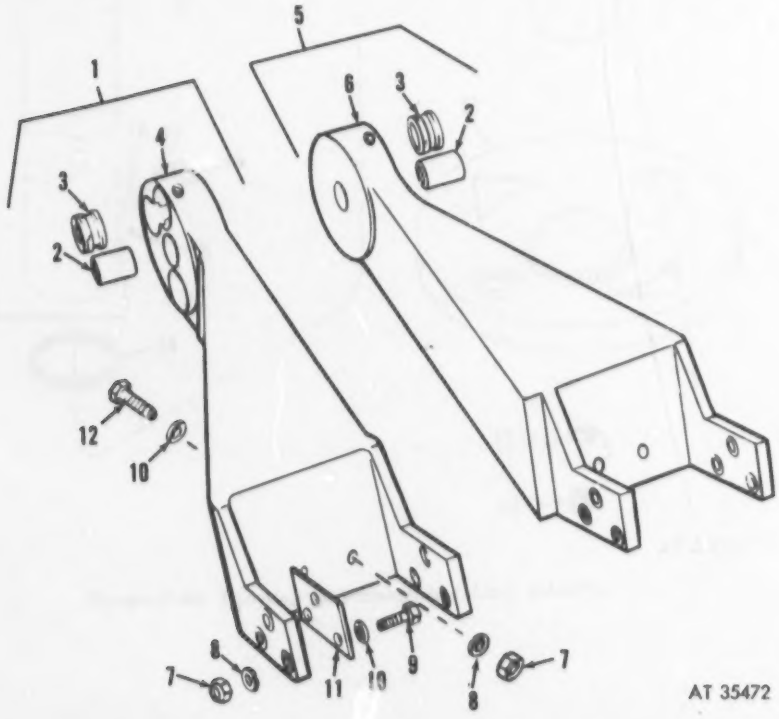

Figure C–36. Rear leveling jack support assembly (M514, XM545).

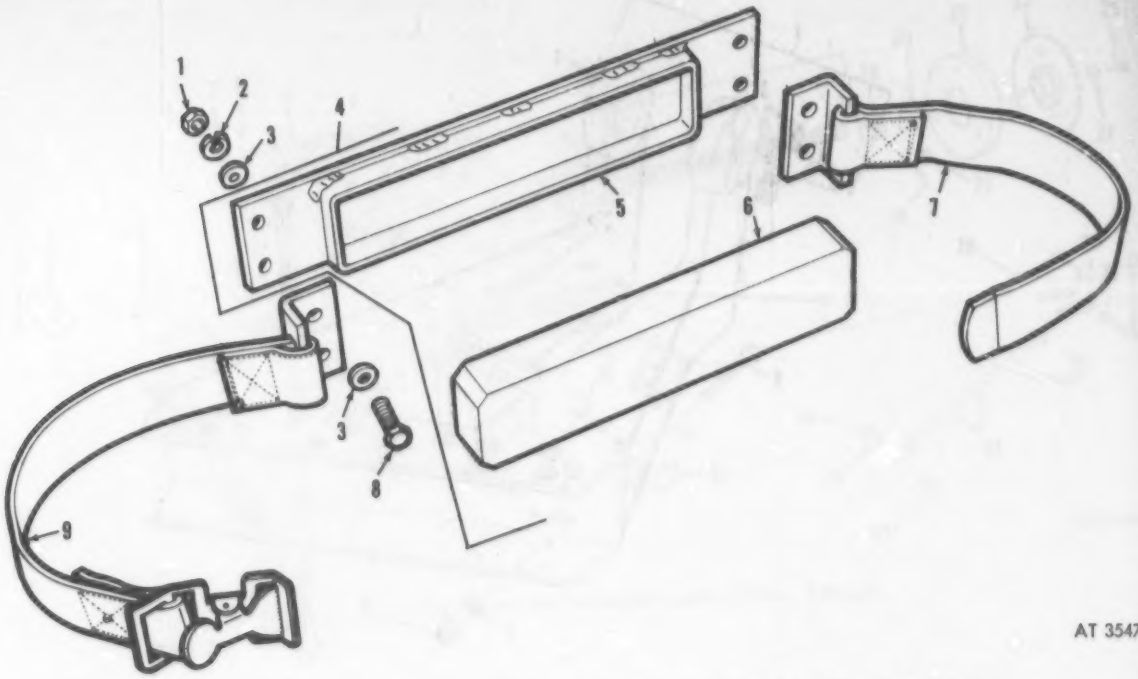

Figure C–37. Leveling jack tie-down straps, pad, and associated parts (M514, XM545).

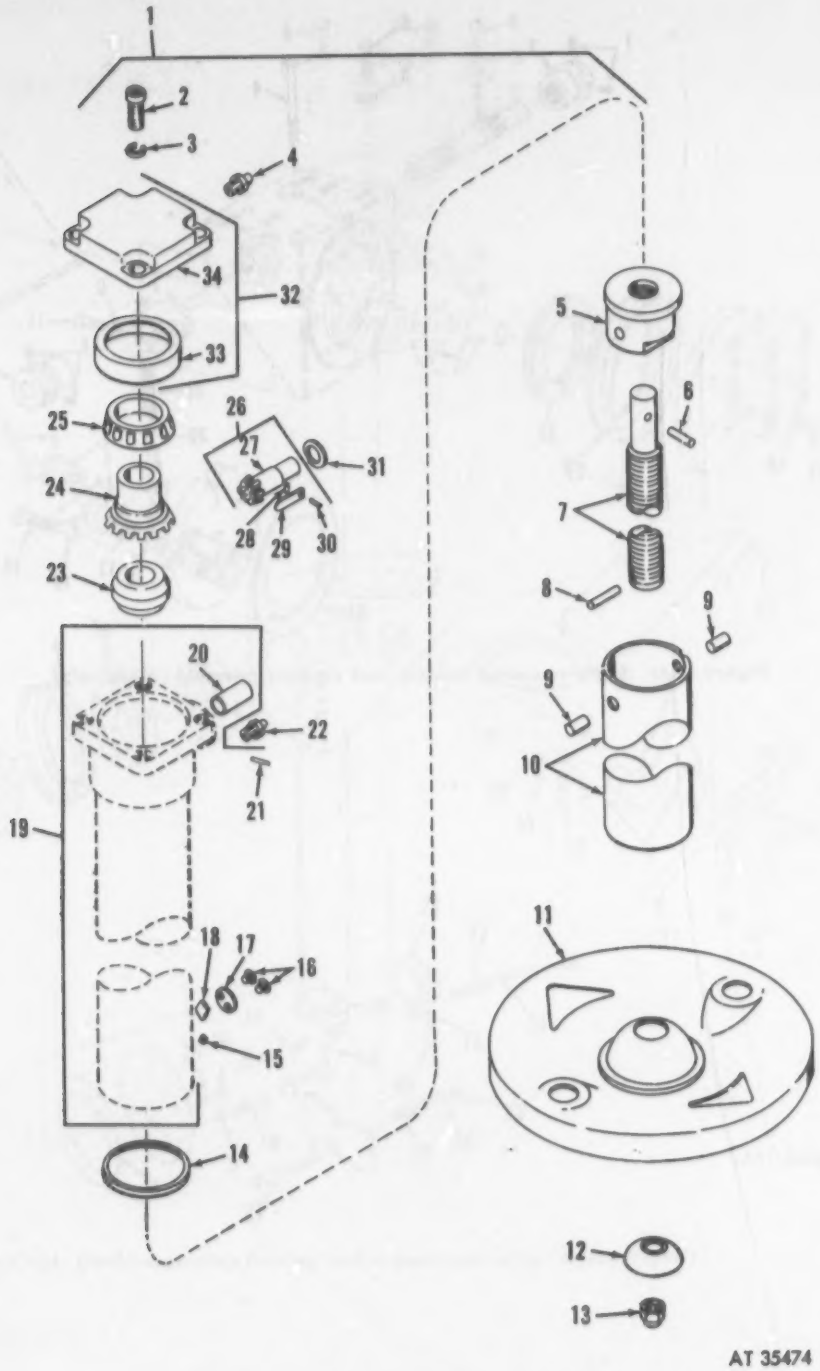

Figure C–38. Leveling jack assembly (M390, M390C).

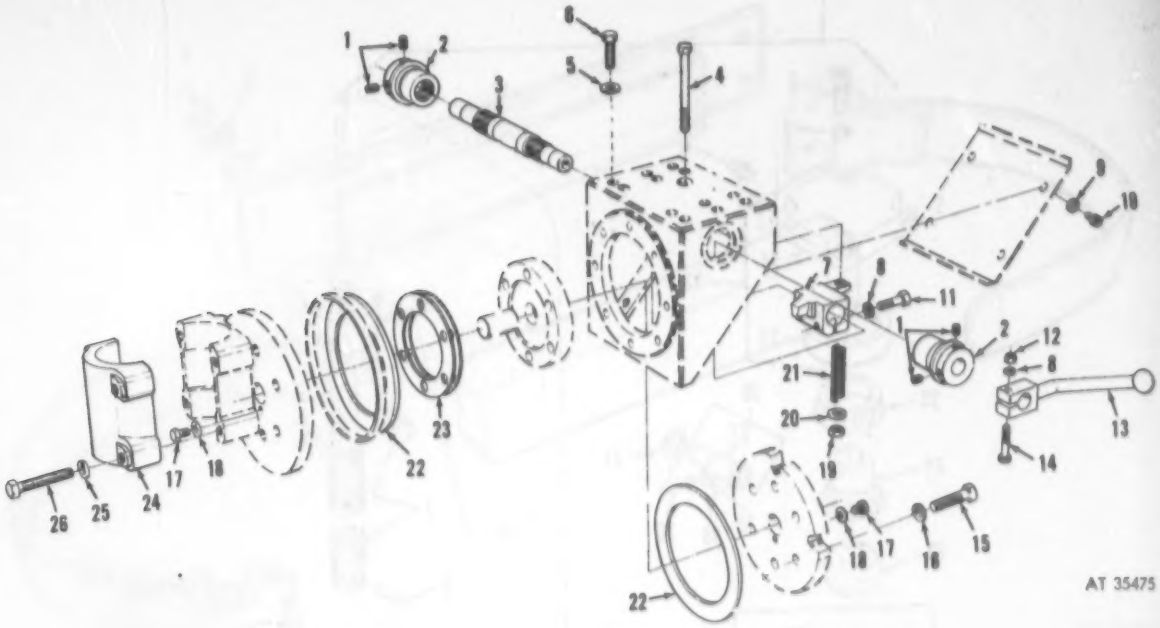

Figure C–39. Single-swiveling leveling jack support assembly (M390 only).

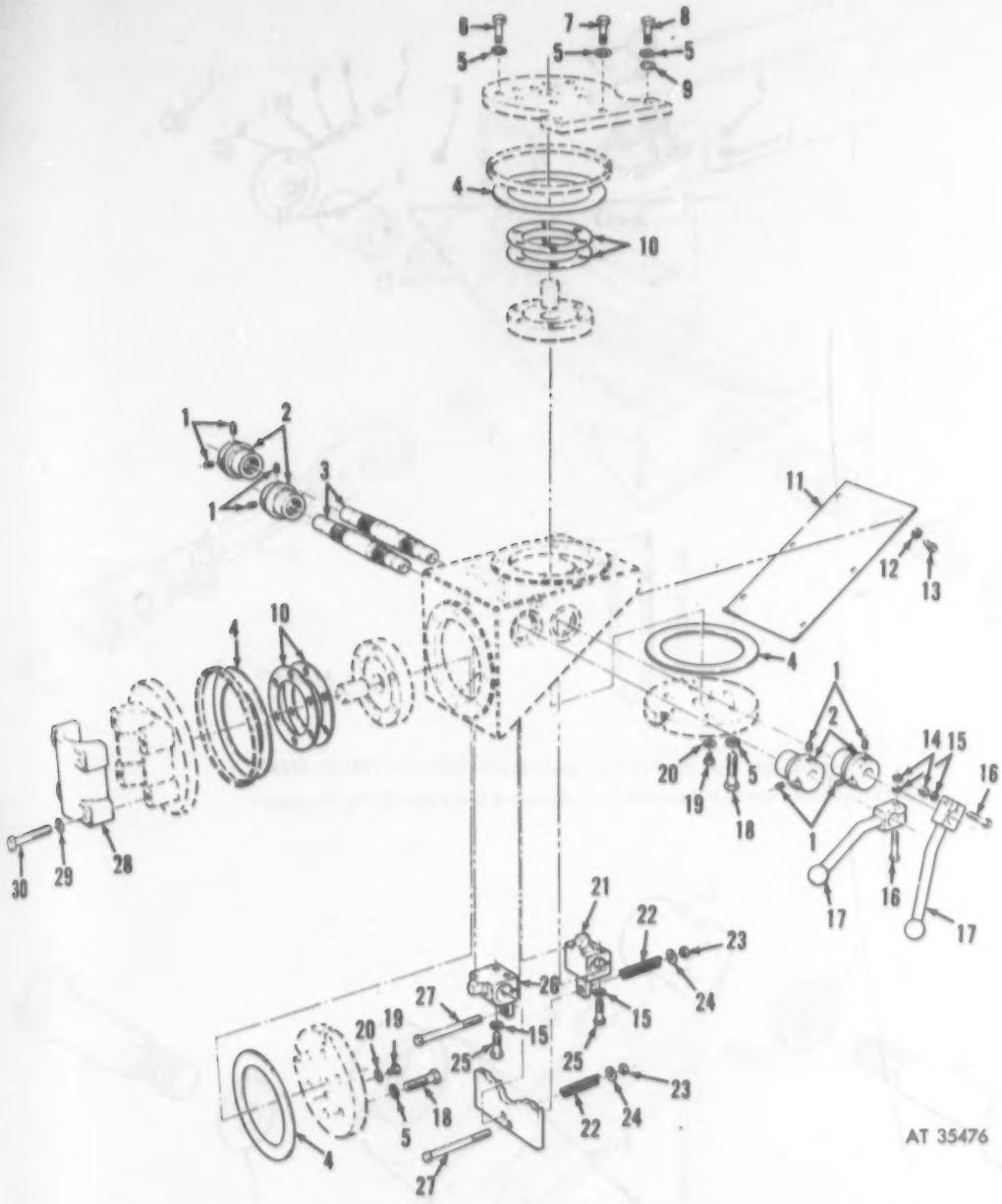

Figure C–40. Double-swiveling leveling jack support assembly (M390, M390C).

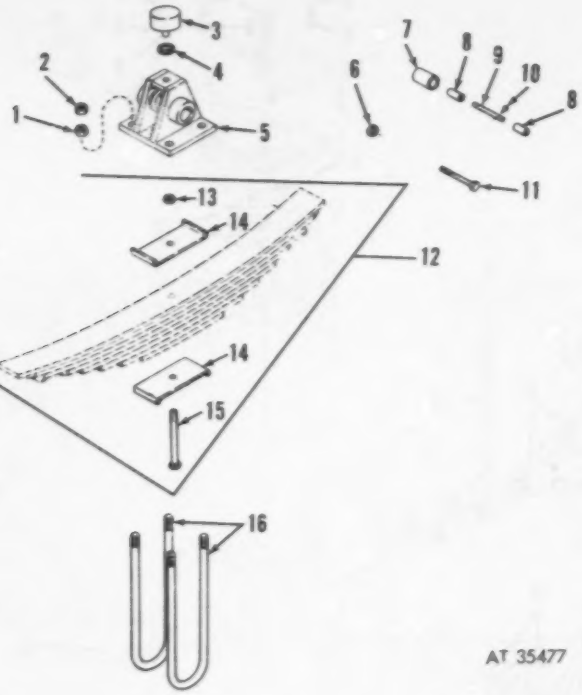

Figure C–41. Spring, bracket, and associated parts (M390, M390C).

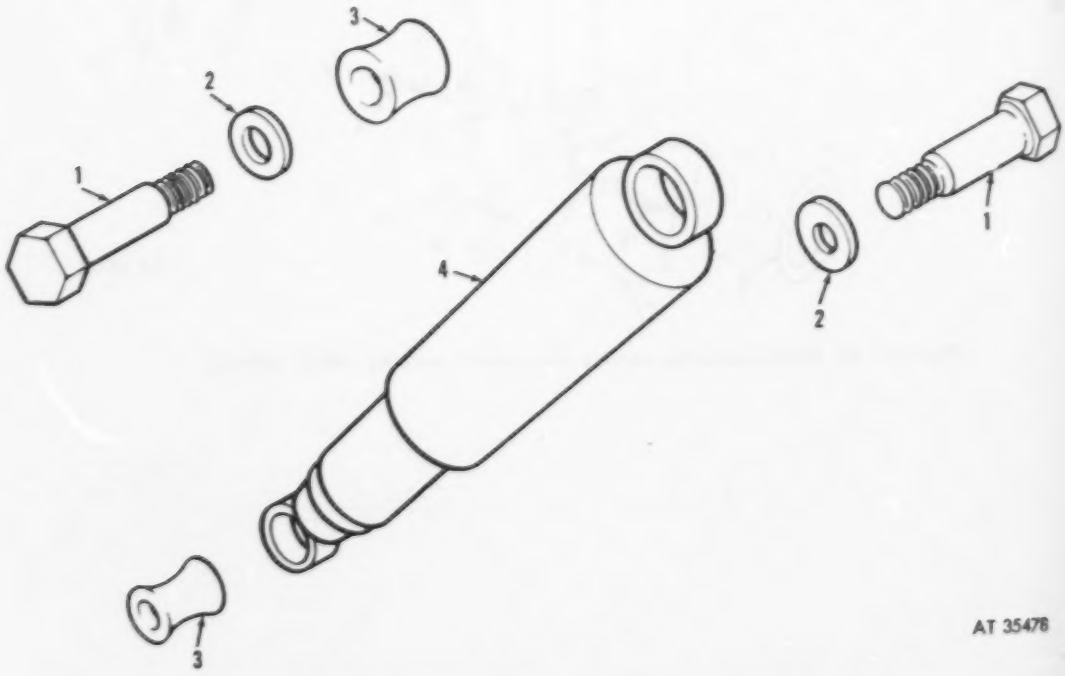

Figure C–42. Shock absorber assembly and associated parts (M514, XM545).

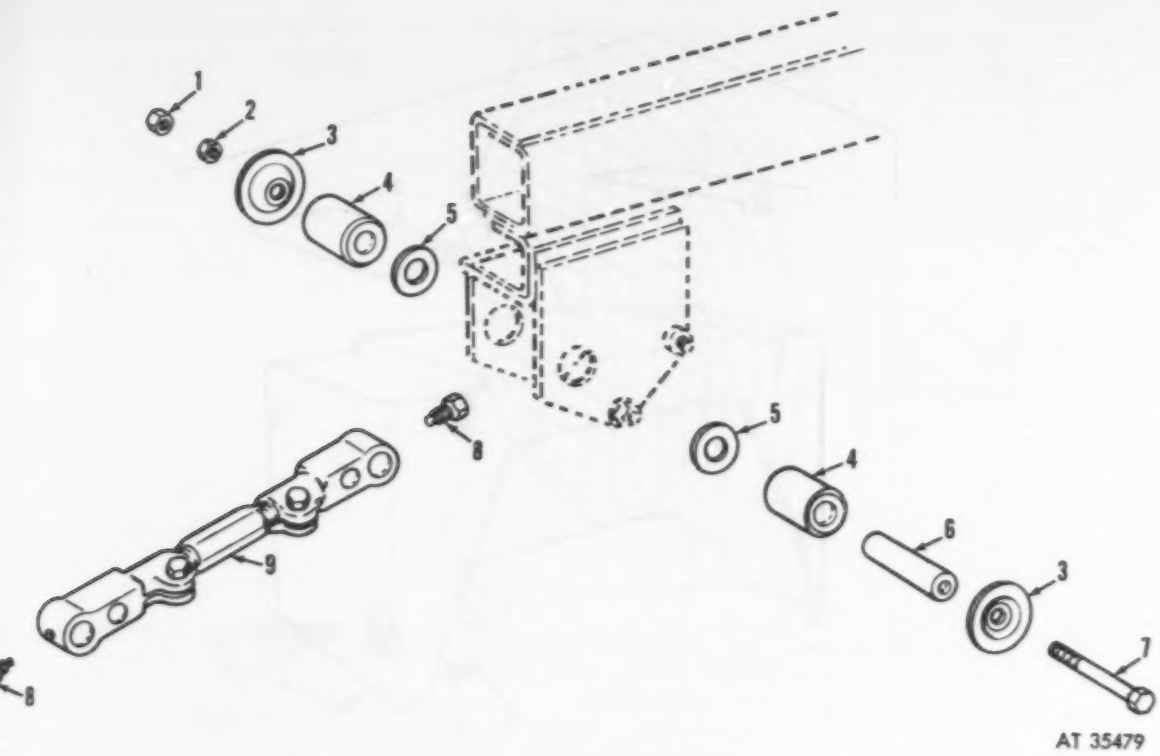

Figure C–43. Radius rod assembly and associated parts (M390, M390C).

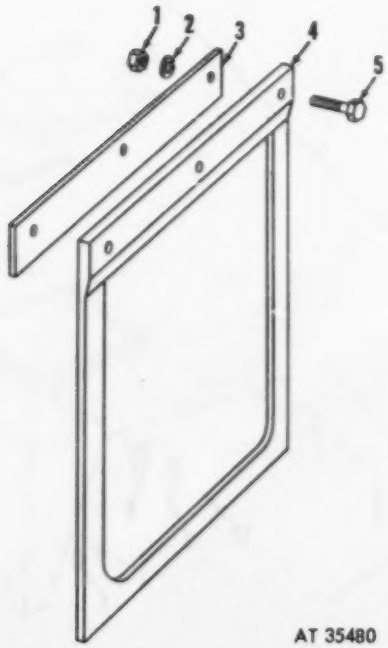

Figure C–44. Wheel splash guard and associated parts (M390, M390C).

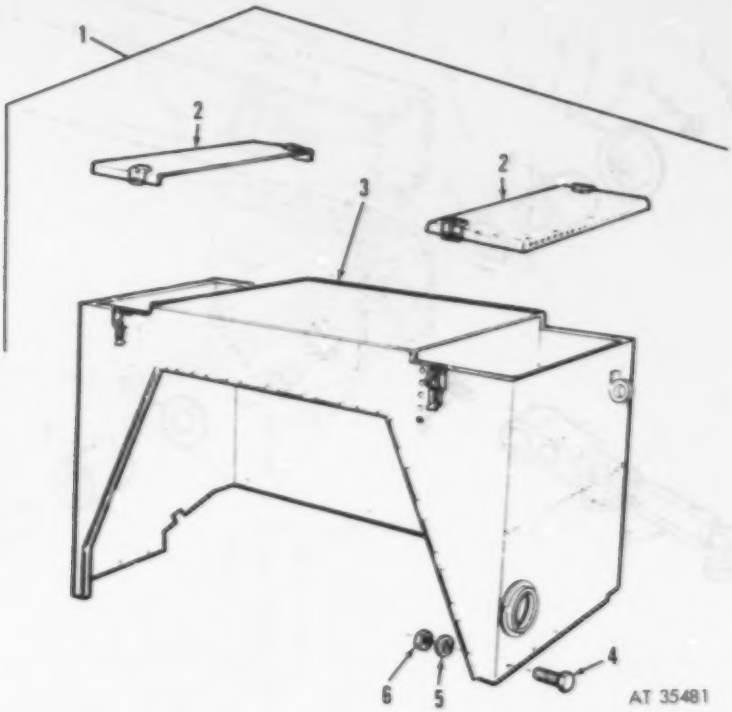

Figure C–45. Right fender and tool box assembly (M514 only).

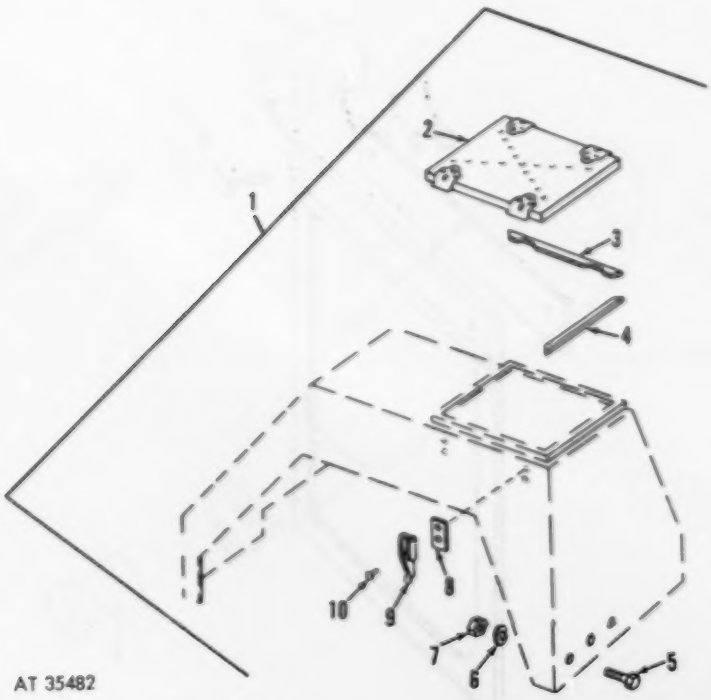

Figure C–46. Left fender and tool box assembly (M514 only).

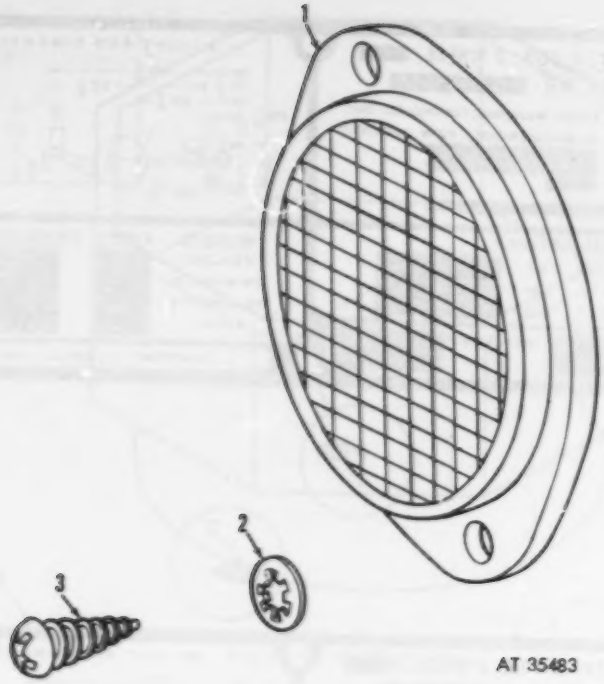

Figure C–47. Reflector and associated parts.

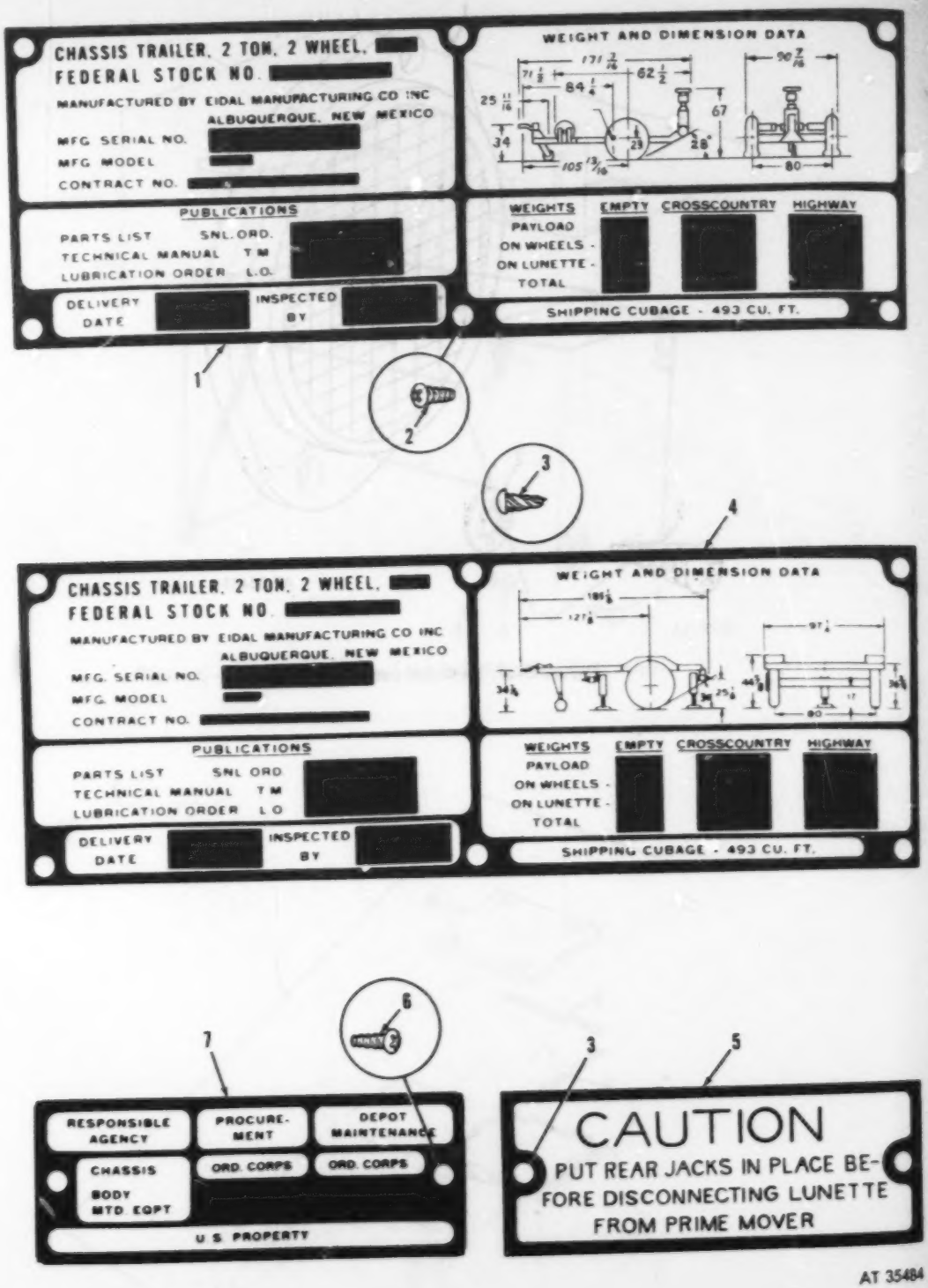

Figure C–48. Data plates.

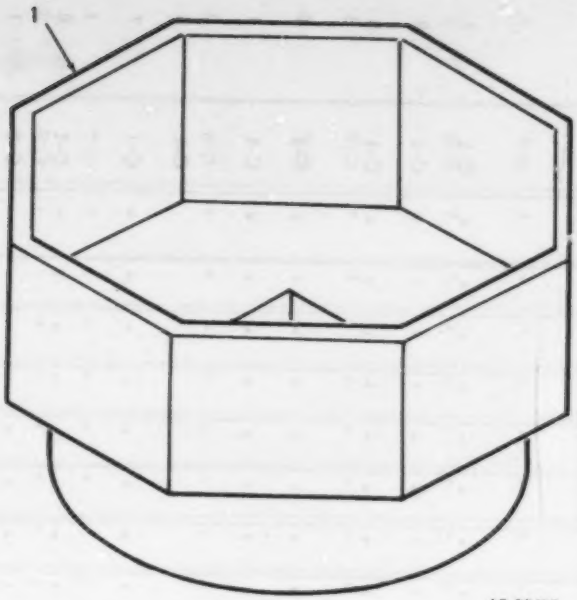

Figure C–49. Special tools.

Section II. REPAIR PARTS LIST

(1) SMR code	(2) Federal stock number	(3) Description / Reference number & mfr. code / Usable on code	(4) Unit of meas	(5) Qty inc in unit	(6) 15-day organization maintenance allowance (a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(7) 30-day DS maintenance allowance (a) 1-20	(b) 21-50	(c) 51-100	(8) 30-day GS maintenance allowance (a) 1-20	(b) 21-50	(c) 51-100	(9) 1 yr alw per 100 equip entgcy	(10) Illustration (a) Figure No.	(b) Item No.
		GROUP 06—ELECTRICAL SYSTEM 0609—LIGHTS *Note:* Electrical Tool Kit, FSN 5180-876-9336, authorized by T.O. & E. will be utilized for applicable replacement parts not specified in this group.															
PAOOZ	6220-846-9745	STOPLIGHT, VEHICULAR: MS51302-1 (96906)	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-1	1
PAOZZ	5305-764-0070	SCREW, MACHINE: door MS51959-46 (96906)	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-1	2
PAOZZ	6220-775-2384	DOOR, ASSEMBLY SIGNAL LIGHT: stoplight 8741646 (19207)	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-1	3
PAOZZ	6220-678-9047	GASKET: door 8694464 (19207)	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-1	4
PAOZZ	6240-019-0877	LAMP, INCANDESCENT: stoplight MS15570-1251 (96906)	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-1	5
XAOZZ		BODY: light 8741650 (19207)		1												C-1	6
PAOZZ	5306-225-9084	SCREW, CAP, HEXAGON: 5/16-24UNF-2A 1/2 in. lg mount MS90726-29 (96906)	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-1	7
PAOZZ	5310-407-9566	WASHER, LOCK: 5/16 nom. size mount bolt MS35338-45 (96906)	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-1	8
PAOOZ	6220-669-5623	STOPLIGHT-TAILLIGHT: MS51329-1 (96906)	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-2	1
PAOZZ	6220-752-6020	DOOR, ASSEMBLY: taillight 7526020 (19207)	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-2	2
PAOZZ	5330-297-7106	PACKING, PREFORMED: door 7320658 (19207)	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-2	3
PAOZZ	6240-044-6914	LAMP, INCANDESCENT: taillight MS35478-1683 (96906)	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-2	4
PAOZZ	6240-019-0877	LAMP, INCANDESCENT: taillight MS15570-1251 (96906)	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-2	5
PAOZZ	6220-368-4845	BODY: taillight															

PAOZZ	5310-637-9541	WASHER, LOCK: ⅜ nom. size, mount screw MS35338-46 (96906)		EA	2	•	•	•	•	•	•	•	•	•	•	•	C-2	7
PAOZZ	5305-269-3209	SCREW, CAP, HEXAGON: ⅜-16 UNC-2A ¾ in. lg MS90725-58 (96906)		EA	2	•	•	•	•	•	•	•	•	•	•	•	C-2	8
PAOOZ	6220-880-1625	LIGHT ASSEMBLY, REAR COMPOSITE MARKER: 24V, stop and turn signal, tail, blackout marker and blckout stop 11614157 (19207)		EA	1	•	•	•	•	•	•	•	•	•	•	•	C-3	1
PAOZZ	6220-179-4324	DOOR AND LENS ASSEMBLY: with screws 11639535 (19207)		EA	1	•	•	•	•	•	•	•	•	•	•	•	C-3	2
PAOZZ	5330-462-0907	GASKET: door 11639519-2 (19207)		EA	1	•	•	•	•	•	•	•	•	•	•	•	C-3	3
PAOZZ	6240-044-6914	LAMP, INCANDESCENT: G6, bulb, single contact, candelabra, bayonet base, blackout marker, blackout stop MS35478-1683 (96906)		EA	1	•	•	•	•	•	•	•	•	•	•	•	C-3	4
PAOZZ	6240-019-3093	LAMP, INCANDESCENT: G6, bulb, single contact, candelabra, bayonet base, tail MS15570-623 (96906)		EA	1	•	•	•	•	•	•	•	•	•	•	•	C-3	5
XAOZZ		BODY ASSEMBLY: 11639520 (19207)			1												C-3	6
PAOZZ	6240-019-0877	LAMP, INCANDESCENT: blackout marker, blackout stop MS15570-1251(96906)		EA	2	•	•	•	•	•	•	•	•	•	•	•	C-3	7
		0613—CHASSIS WIRING HARNESS																
PAOZZ	5340-679-3185	CLIP, RETAINING: intervehicular cable stowage 8363973 (19207)	BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-4	1
PAOZZ	5310-209-0786	WASHER, LOCK: external tooth, ¼ nom. size hose strap screw MS35335-33 (96906)	BD, BE	EA	3	•	•	•	•	•	•	•	•	•	•	•	C-4	2
PAOZZ	5305-052-6922	SCREW, TAPPING: hose strap MS24629-58 (96906)	BD, BE	EA	3	•	•	•	•	•	•	•	•	•	•	•	C-4	3
PAOZZ	5340-655-7761	STRAP, RETAINING: hose MS35140-12 (96906)	BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-4	4
PAOZZ	5310-596-7691	WASHER, LOCK: external tooth, No. 10 MS35335-32 (96906)	BD, BE	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-4	5
PAOZZ	5305-855-0956	SCREW, TAPPING: cover MS24649-47 (96906)	BD, BE	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-4	6
PAOZZ	5340-264-7716	CLAMP, LOOP: harness 7703692 (19207)	BD, BE	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-4	7
PAOZZ	5340-282-7515	CLAMP, LOOP: harness 7743749 (19207)	BD, BE	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-4	8

(1) SMR code	(2) Federal stock number	(3) Description — Reference number & mfr. code	(3) Usable on code	(4) Unit of meas	(5) Qty inc in unit	(6) 15-day organization maintenance allowance (a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(7) 30-day DS maintenance allowance (a) 1-20	(b) 21-50	(c) 51-100	(8) 30-day GS maintenance allowance (a) 1-20	(b) 21-50	(c) 51-100	(9) 1 yr alw per 100 equip entgcy	(10) Illustration (a) Figure No.	(b) Item No.
		0613—CHASSIS WIRING HARNESS—Cont.																
PAOZZ	5325-720-6300	GROMMET, RUBBER: right taillight harness MS35490-39 (96906)	BD, BE	EA	8	*	*	*	*	*	*	*	*	*	*	*	C-4	9
PAOZZ	5325-276-6082	GROMMET, RUBBER: left taillight harness MS35489-43S (96906)	BD, BE	EA	3	*	*	*	*	*	*	*	*	*	*	*	C-4	10
PAOZZ	2590-611-7883	CLIP ASSEMBLY, SPRING: taillight harness 8747908 (19207)	BD, BE	EA	4	*	*	*	*	*	*	*	*	*	*	*	C-4	11
PAOZZ	5325-276-5954	GROMMET, RUBBER: harness MS35489-49 (96906)	BD, BE	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-4	12
PAOZZ	5325-276-6089	GROMMET, RUBBER: harness MS35489-16 (96906)	BD, BE	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-4	13
PAOZZ	5340-057-3111	STRAP, RETAINING: intervehicular cable 573111 (21450)	BD, BE	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-4	14
PAOZZ	5340-040-2364	CLIP, SPRING: harness junction 8347212 (19207)	BD, BE	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-4	15
PAOZZ	5305-984-6193	SCREW, MACHINE: No. 8-32UNC-2A ½ in. lg intervehicular cable clamp MS35206-245 (96906)	BB, BC	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-5	1
PAOZZ	5340-275-6042	CLAMP, LOOP: intervehicular cable 545033 (21450)	BB, BC	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-5	2
PAOZZ	5310-045-3299	WASHER, LOCK: No. 8 intervehicular cable clamp screw MS35338-42 (96906)	BB, BC	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-5	3
PAOZZ	5310-934-9757	NUT, PLAIN, HEXAGON: intervehicular cable clamp screw MS35649-282 (96906)	BB, BC	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-5	4
PAOZZ	5360-535-1924	SPRING, HELICAL: intervehicular cable retaining 7001762 (19207)	BB, BC	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-5	5
PAOZZ	5305-988-1721	SCREW, MACHINE: ¼-20UNC-2A ⅜ in. lg taillight clips (4), harness straps (11),	BB, BC	EA	20	*	*	*	*	*	*	*	*	*	*	*	C-5	6

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		0613—CHASSIS WIRING HARNESS—Cont.															
XAOZZ		BUSHING: intervehicular cable connector 7358183 (19207)		1												C-7	3
P-O	9905-841-4445	BAND, MARKER: cable MS39020-2 (96906) BB, BC	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-7	4
XAOZZ		CAP, CIRCUIT: cable 8347216 (19207)		1												C-7	5
XAOZZ		TERMINAL, LUG: cable 7056709 (19207) BD, BE		1												C-7	6
PAOZZ	5940-050-6209	TERMINAL, LUG: cable 506209 (21450) BB, BC	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-7	6
PAOZZ	9905-752-4649	BAND MARKER: cable MS39020-1 (96906)	EA	8	*	*	*	*	*	*	*	*	*	*	*	C-7	7
		GROUP 11—REAR AXLE															
		1100—REAR AXLE ASSEMBLY															
PAOFZ	2530-679-3683	AXLE, VEHICULAR: non-driving 8363957 (19207)	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-8	1
		GROUP 12—BRAKES															
		1201—HANDBRAKES															
PAOZZ	5315-839-2326	PIN, COTTER: 1/32 dia. 1/2 in. lg handbrake cable retaining clevis MS24665-281 (96906) BD, BE	EA	2	*	*	*		*	*	*	*	*	*	*	C-9	1
PAOZZ	5315-754-0848	PIN, STRAIGHT, HEADED: 5/16 dia. 1 1/16 lg handbrake cable retaining MS35810-33 (96906) BD, BE	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-9	2
PAOZZ	5365-247-4082	SPACER, SLEEVE: hand lever 8759893 (19207) BD, BE	EA	6	*	*	*	*	*	*	*	*	*	*	*	C-9	4
PAOZZ	5310-732-0558	NUT, PLAIN, HEXAGON: 3/8-16UNC-2B MS51967-8 (96906) BD, BE	EA	6	*	*	*	*	*	*	*	*	*	*	*	C-9	5
PAOZZ	5310-637-9541	WASHER, LOCK: 3/8 nom. size hand lever MS35338-46 (96906) BD, BE	EA	6	*	*	*	*	*	*	*	*	*	*	*	C-9	6

PAOZZ	2530-169-5727	BRACKET, ANGLE: hand lever, right 8759892 (19207)	BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-9	7
PAOZZ	2530-330-3262	LEVER ASSEMBLY, PARKING: hand 7392815 (19207)	BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-9	8
PAOZZ	2530-815-7082	PLATE, GUARD BRAKE: hand lever 8759895 (19207)	BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-9	9
PAOZZ	5306-717-4408	BOLT, MACHINE: hand lever 8759894 (19207)	BD, BE	EA	6	•	•	•	•	•	•	•	•	•	•	•	C-9	10
PAOZZ	2530-815-7054	SPACER, HANDBRAKE: hand lever 8759890 (19207)	BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-9	11
PAOZZ	2530-679-4506	WIRE, ROPE ASSEMBLY: brake cable 8675894 (19207)	BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-9	12
PAOZZ	5310-733-9422	WASHER, SLOTTED: handbrake cable conduit 7339422 (19207)	BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-9	13
PAOZZ	5310-044-3921	NUT, PLAIN, HEXAGON: turnbuckle locking 443921 (21450)	BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-9	14
PAOZZ	5340-053-8008	TURNBUCKLE BODY: handbrake cable 538008 (21450)	BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-9	15
PAOZZ	5310-732-0559	NUT, PLAIN HEXAGON: ⅝-24-UNF-2B turnbuckle MS51968-8 (96906)	BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-9	16
PAOZZ	2530-679-4515	WIRE ROPE ASSEMBLY: handbrake 8675895 (19207)	BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-9	17
PAOZZ	5315-679-4576	PIN, STRAIGHT, HEADED: cable actuating 8740063 (19207)	BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-9	18
PAOZZ	5315-839-2325	PIN, COTTER: 1/10 dia, ½ in. lg, actuating pin MS24665-132 (96906)	BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-9	19
PAOZZ	5340-282-7515	CLAMP, LOOP: cable conduit 7743749 (19207)	BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-9	20
PAOZZ	5310-045-3296	WASHER, LOCK: No. 10 cable conduit clamp screw MS35338-43 (96906)	BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-9	21
PAOZZ	5305-984-6210	SCREW, MACHINE: No. 10-UNC-2A ½ in lg cable conduit clamp MS35206-263 (96906)	BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-9	22

(1) SMR code	(2) Federal stock number	(3) Description Reference number ▲ mfr. code — Usable on code	(4) Unit of meas	(5) Qty inc in unit	(6) 15-day organization maintenance allowance (a) 1–5	(b) 6–20	(c) 21–50	(d) 51–100	(7) 30-day DS maintenance allowance (a) 1–20	(b) 21–50	(c) 51–100	(8) 30-day GS maintenance allowance (a) 1–20	(b) 21–50	(c) 51–100	(9) 1 yr alw per 100 equip entgcy	(10) Illustration (a) Figure No.	(b) Item No.
		1201—HANDBRAKES—Continued															
PAOZZ	5340-057-3111	STRAP, RETAINING: handbrake cable BD, BE 573111 (21450)	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-9	23
PAOZZ	5306-655-9522	BOLT, ASSEMBLED WASHER: handbrake cable strap BD, BE 425324 (21450)	EA	4	*	*	*	*	*	*	*	*	*	*	*	C-9	3
PAOZZ	5315-842-3044	PIN, COTTER: 3/32 dia 3/4 in. lg clevis pin BB, BC MS24665-283 (96906)	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-10	1
PAOZZ	5315-815-8840	PIN, STRAIGHT, HEADED: 3/8 dia, clevis 1 7/32 in. lg BB, BC MS35810-34 (96906)	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-10	2
PAOZZ	5340-985-0923	CLEVIS, ROD END: brake rod BB, BC MS35812-4 (96906)	EA	2	*	*	*	*	*	*		*	*	*	*	C-10	3
PAOZZ	5310-732-0559	NUT, PLAIN, HEXAGON: 3/8-24 UNF-2B, brake rod clevis BB, BC MS51968-8 (96906)	EA	4	*	*	*	*	*	*	*	*	*	*	*	C-10	4
PAOZZ	5306-994-1019	ROD, THREADED END: brake BB, BC 8363986 (19207)	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-10	5
PAOZZ	5340-693-0739	TURNBUCKLE, BODY: brake rod BB, BC 8331946 (19207)	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-10	6
PAOZZ	5310-923-1925	NUT, PLAIN, HEXAGON: 3/8-24UNF-2B-LH brake rod turnbuckle BB, BC MS45905-S6 (96906)	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-10	7
PAOZZ	2530-679-3678	CONTROL LINK: flexible parking brake BB, BC 7049884 (19207)	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-10	8
XBOZZ		BRACKET: brake rod BB, BC 5303461 (19207)	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-10	
PAOZZ	5310-407-9566	WASHER, LOCK: 5/16 nom. size, brake rod BB, BC MS35338-45 (96906)	EA	6	*	*	*	*	*	*	*	*	*	*	*	C-10	10
PAOZZ	5305-984-5672	SCREW, MACHINE: 5/16-18UNC-2A 3/8 in lg. rod bracket BB, BC MS35206-292 (96906)	EA	4	*	*	*	*	*	*	*	*	*	*	*	C-10	11
PAOZZ	5310-087-4652	NUT, SELF-LOCKING: lever screw BB, BC MS51922-17 (96906)	EA	6	*	*	*	*	*	*	*	*	*	*	*	C-10	12
PAOZZ	2530-330-3262	LEVER, ASSEMBLY: parking BB, BC 7392815 (19207)	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-10	13

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		1202—SERVICE BRAKES—Cont.															
PAFZZ	5320-817-9535	RIVET, TUBULAR: (Component of Lining Set, FSN 2530-693-0800) 7612769 (19207) BD, BE	EA	20					•	•	•	•	•	•	•	C-11	12
PAFZZ	2530-814-8143	LINING, FRICTION: (Component of Lining Set, FSN 2530-693-0888) 8016974 (19207) BD, BE	EA	2					•	•	•	•	•	•	•	C-11	13
PAFZZ	2530-693-0888	LINING SET: BD, BE	EA	V													
		Composed of:															
		LINING 8016974 (19207)		4													
		RIVET 7612769 (19207)		40													
XAFZZ		SHOE: brake 8015975 (19207) BD, BE		4												C-11	14
PAOZZ	5360-321-6464	SPRING, HELICAL: shoe tension 8713986 (19207) BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-11	15
PAOZZ	5310-333-7553	WASHER, FLAT: guide pin 8016978 (19207) BD, BE	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-11	16
PAOZZ	5365-582-7363	WASHER, "C": guide pin 8016879 (19207) BD, BE	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-11	17
XBOZZ		PLATE: shoe anchor 8016976 (19207) BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-11	18
PAOZZ	2530-092-9642	PIN: brake anchor 8017162 (19207) BD, BE	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-11	19
PAOZZ	2530-092-9641	BUSHING, ECCENTRIC: brake anchor 8017159 (19207) BD, BE	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-11	20
PAOZZ	2530-773-9386	LINK, TOGGLE: left 7335058 (19207) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-11	21
PAOZZ	2530-773-9387	LINK, TOGGLE: right 7335059 (19207) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-11	21
--OZZ		WASHER: brake guide pin 8017164 (19207) BD, BE		4												C-11	22
XAOZZ		PLATE: backing brake left 8016980 (19207) BD, BE		1												C-11	23
PAOZZ	2530-443-0033	PLATE: backing brake right 8016981 (19207) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-11	23

PAOZZ	2530-678-4086	WASHER, FLAT: shoe anchor pin 8016977 (19207)	BD, BE	EA	4	•	•	•	•	•	•	•	•	•	•	•	•	C-11	24
PAOZZ	5310-584-5272	WASHER, LOCK: ½ in. nom size shoe anchor pin MS35338-48 (96906)	BD, BE	EA	4	•	•	•	•	•	•	•	•	•	•	•	•	C-11	25
PAOZZ	5310-732-0560	NUT, PLAIN HEXAGON: shoe anchor pin MS51968-14 (96906)	BD, BE	EA	4	•	•	•	•	•	•	•	•	•	•	•	•	C-11	26
PAOZZ	5305-269-2804	SCREW, CAP, HEXAGON: ⅜-24UNF-2A 1⅛ in. lg back plate MS90726-61 (96906)	BD, BE	EA	12	•	•	•	•	•	•	•	•	•	•	•	•	C-11	27
PAOZZ	5310-637-9541	WASHER, LOCK: ⅜ nom. size back plate screw MS35338-46 (96906)	BD, BE	EA	12	•	•	•	•	•	•	•	•	•	•	•	•	C-11	28
PAOZZ	5310-732-055	NUT, PLAIN, HEXAGON: ⅜-24UNF-2B, back plate screw MS51968-8 (96906)	BD, BE	EA	12	•	•	•	•	•	•	•	•	•	•	•	•	C-11	29
PAOOZ	2530-7[illegible]2-6283	BRAKE, ASSEMBLY: left 8723800 (19207)	BB, BC	EA	1	•	•	•	•	•	•	•	•	•	•	•	•	C-12	1
PAOOZ	2530-793-1940	BRAKE, ASSEMBLY: right 8723801 (19207)	BB, BC	EA	1	•	•	•	•	•	•	•	•	•	•	•	•	C-12	1
PAOZZ	[illegible]306-741-1760	BOLT, SQUARE NECK: plate 7411760 (19207)	BB, BC	EA	4	•	•	•	•	•	•	•	•	•	•	•	•	C-12	2
PAOZZ	2530-741-2106	PIN: guide 7412106 (19207)	BB, BC	EA	4	•	•	•	•	•	•	•	•	•	•	•	•	C-12	3
PAOZZ	5310-903-3993	NUT, PLAIN, HEXAGON: ¼-20UNF-2B, pivot pin MS35690-731 (96906)	BB, BC	EA	4	•	•	•	•	•	•	•	•	•	•	•	•	C-12	4
PAOZZ	5310-550-3503	WASHER, LOCK: external tooth, ⅜ nom size, spring pivot pin MS35335-36 (96906)	BB, BC	EA	4	•	•	•	•	•	•	•	•	•	•	•	•	C-12	5
PAOZZ	2530-741-2103	SPACER, RING: shoe 7412103 (19207)	BB, BC	EA	2	•	•	•	•	•	•	•	•	•	•	•	•	C-12	6
PAOZZ	5310-641-9939	WASHER, FLAT: shoe 5323088 (19207)	BB, BC	EA	2	•	•	•	•	•	•	•	•	•	•	•	•	C-12	7
PAOZZ	5310-582-5965	WASHER, LOCK: ¼ nom size, shoe MS35338-44 (96906)	BB, BC	EA	2	•	•	•	•	•	•	•	•	•	•	•	•	C-12	8
PAOZZ	5310-924-4218	NUT, PLAIN HEXAGON: shoe 218586 (21450)	BB, BC	EA	2	•	•	•	•	•	•	•	•	•	•	•	•	C-12	9
PAOZZ	3040-150-7127	CONNECTING LINK: shoe, left 8733826 (19207)	BB, BC	EA	1	•	•	•	•	•	•	•	•	•	•	•	•	C-12	10
PAOZZ	2530-074-2357	CONNECTING LINK: shoe, right 8733927 (19207)	BB, BC	EA	1	•	•	•	•	•	•	•	•	•	•	•	•	C-12	10

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		1202—SERVICE BRAKES—Cont.															
PAOZZ	5310-314-0764	WASHER, SPRING TENSION: connecting link 8733935 (19207) BB, BC	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-12	11
PAOZZ	5310-314-0765	WASHER, FLAT: connecting link 8733936 (19207) BB, BC	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-12	12
PAOZZ	5310-322-7260	WASHER, SLOTTED: connecting link 8733937 (19207) BB, BC	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-12	13
PAOZZ	530-322-7261	PIN, SERVICE BRAKE: connecting link 8733938 (19207) BB, BC	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-12	14
PAOZZ	2530-973-2355	LEVER: brake shoe, l ft 8733911 (19207) BB, BC	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-12	15
PAOZZ	2530-973-2356	LEVER: brake shoe, right 8733912 (19207) BB, BC	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-12	15
PAOZZ	5360-699-9018	SPRING, HFLICAL EXTENSION: shoe return 8720515 (19207) BB, BC	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-12	16
PAOZZ	2530-522-1157	RAMP: handbrake cable, left 8733892 (19207) BB, BC	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-12	17
PAOZZ	2530-794-9763	RAMP: handbrake cable, right 8733893 (19207) BB, BC	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-12	17
PAOZZ	5305-267-8974	SCREW, CAP, HEXAGON: ¼-28UNF-2A, 1.000 in. lg, brake shoe MS90726-8 (96906) BB, BC	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-12	18
PAOFF	2530-693-1007	BRAKE SHOE ASSEMBLY 7064978 (19207) BB, BC	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-12	19
XAFZZ		SHOE, BRAKE: 7064 79 (19207) BB, BC		2												C-12	20
PAFZZ	2530-522-4183	LINING, FRICTION: shoe 8720517 (19207) BB, BC	EA	4					•		•	•	•	•	•	C-12	21
PAFZZ	5320-011-9951	RIVET, TUBULAR: lining 8710699 (19207) BB, BC	EA	48					•	•	•	•	•	•	•	C-12	22
PAOZZ	5305-988-1723	SCREW, MACHINE: ¼-20UNC-2A, ½ in. lg, plate MS35206-279 (96906) BB, BC	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-12	23

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		1202—SERVICE BRAKES—Cont.															
PAOZZ	2530-133-9831	PLATE, BACKING: brake left BB, BC 8753932 (19207)	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-13	12
PAOZZ	2530-133-9830	PLATE, BACKING: brake right BB, BC 8733933 (19207)	EA	1	•	•	•	•		•	•	•	•	•	•	C-13	12
PAOZZ	1440-994-8975	STUD AND SPRING ASSEMBLY: adjusting BB, BC 8720331 (19207)	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-13	13
		1204—HYDRAULIC BRAKE SYSTEM															
PAOZZ	5340-896-1094	CLAMP: master cylinder tube BD, BE 573036 (21450)	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-14	1
PAOZZ	5310-209-0786	WASHER, LOCK: external tooth, ¼ nom. size master cylinder tube clamp screw BD, BE MS35335-33 (96906)	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-14	2
--OZZ		SCREW, CAP: master cylinder tube clamp BD, BE MS24649-57 (96906)	EA	1												C-14	3
PAOZZ	4730-535-1535	BOLT, FLUID PASSAGE: wheel cylinder BD, BE 8017233 (18876)	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-14	4
PAOZZ	5310-274-4544	WASHER, FLAT: wheel cylinder BD, BE 5298658 (19207)	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-14	5
PAOZZ	4730-419-9425	CONNECTOR, AIR BRAKE: wheel cylinder BD, BE 7745464 (19207)	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-14	6
PAOZZ	5310-359-0458	WASHER, FLAT: wheel cylinder BD, BE 5214930 (19207)	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-14	7
PAOZZ	2530-679-4486	TUBE ASSEMBLY, METAL: BD, BE 10939625 (19207)	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-14	8
PAOZZ	4730-287-1707	TEE: brake tube BD, BE 190153 (21450)	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-14	9
PAOZZ	4730-261-4224	ELBOW, TUBE TO HOSE: brake tube to hose BD, BE 435801 (21450)	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-14	10
PAOZZ	2530-679-4511	HOSE ASSEMBLY, RUBBER: brake BD, BE 8740064 (19207)	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-14	11
PAOZZ	5305-951-5617	SCREW, CAP: tube strap BD, BE MS24630-46 (96906)	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-14	12

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		1204—HYDRAULIC BRAKE SYSTEM—Cont.															
PAOZZ	5310-274-4544	WASHER, FLAT: tube retaining bolt 5298653 (19207) BB, BC	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-16	2
PAOZZ	4730-419-9425	CONNECTOR: tube retaining bolt 7745464 (19207) BB, BC	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-16	3
PAOZZ	5310-741-2088	GASKET: connector mount 7412088 (19207) BB, BC	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-16	4
PAOZZ	5306-225-8496	SCREW, CAP, HEXAGON: plate, 5/16-18UNC-2A 5/8 in. lg MS90725-31 (96906) BB, BC	EA	8	•	•	•	•	•	•	•	•	•	•	•	C-16	5
PAOZZ	5310-407-9566	WASHER, LOCK: 5/16 nom. size, plate MS35338-45 (96906) BB, BC	EA	8	•	•	•	•	•	•	•	•	•	•	•	C-16	6
PAOZZ	2530-741-2068	SHIELD: cylinder, upper 7412068 (19207) BB, BC	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-16	7
PAOZZ	2530-737-3260	BLEEDER VALVE HYDRAULIC: cylinder 7373260 (19207) BB, BC	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-16	8
PAOZZ	2530-741-2065	CYLINDER ASSEMBLY: 7412065 (19207) BB, BC	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-16	9
PAOZZ	2530-741-2050	SHIELD: cylinder, lower 7412050 (19207) BB, BC	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-16	10
PAOZZ	2530-566-7133	TUBE ASSEMBLY, METAL: brake shoe, left 8733920 (19207) BB, BC	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-16	11
PAOZZ	2530-741-1907	TUBE ASSEMBLY, METAL: brake shoe, right 8733916 (19207) BB, BC	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-16	11
PAOZZ	2530-741-1903	CONNECTOR: brake shoe tubes 7411903 (19207) BB, BC	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-16	12
PAOZZ	2530-566-7134	TUBE ASSEMBLY, METAL: brake shoe, left 8733922 (19207) BB, BC	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-16	13
PAOZZ	2530-630-9928	TUBE ASSEMBLY, METAL: brake shoe, right 8733918 (19207) BB, BC	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-16	13
PAOZZ	2530-318-1115	CYLINDER ASSEMBLY: left 8017002 (19207) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-17	1

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		1208—AIR BRAKE SYSTEM—Continued															
PAOZZ	4730-069-1186	ADAPTER, STRAIGHT TO PIPE: hose to tube MS39179-5 (96906) BD, BE	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-19	7
PAOZZ	5975-335-2586	TUBE, NONMETALLIC: filter to cylinder 17C18035090 (80244) BD, BE	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-19	8
PAOZZ	5340-282-7793	STRAP, RETAINING: filter tube MS35140-6 (96906) BD, BE	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-19	9
PAOZZ	5310-045-3296	WASHER, LOCK: No. 10 filter tube strap MS35338-43 (96906) BD, BE	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-19	10
PAOZZ	5305-951-5617	SCREW: filter tube strap MS24630-46 (96906) BD, BE	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-19	11
PAOZZ	4710-203-3171	TUBE, COPPER: filter to chamber WWT775 (81348) BD, BE	FT	V	*	*	*	*	*	*	*	*	*	*	*	C-19	12
--OZZ		GROMMET, RUBBER: filter tube MS35490-35 (96906) BD, BE	EA	1												C-19	13
--OZZ		ELBOW, PIPE: filter to chamber tube 444166 (21450) BD, BE	EA	1												C-19	14
PAOZZ	4730-301-7470	COUPLING, PIPE: filter to chamber tube elbow 444000 (24617) BD, BE	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-19	15
PAOZZ	4730-069-1187	ELBOW, PIPE TO TUBE: filter to chamber tube 504256 (21450) BD, BE	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-19	16
PAOZZ	5340-809-1494	CLAMP, LOOP: air hose MS21333-105 (96906) BB, BC	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-20	1
PAOZZ	5310-582-5965	WASHER, LOCK: ¼ nom. size, hose clamp screw MS35338-44 (96906) BB, BC	EA	6	*	*	*	*	*	*	*	*	*	*	*	C-20	2
PAOZZ	5305-988-1725	SCREW, MACHINE: ¼-20UNC-2A, ¾ in. lg, air hose clamp MS35206-281 (96906) BB, BC	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-20	3
PAOZZ	4730-278-6318	COUPLING, ASSEMBLY: filter line 8328782 (19207) BB, BC	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-20	4
PAOZZ	4730-781-6531	ADAPTER, STRAIGHT PIPE: hose to tube MS39206-7 (96906) BB, BC	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-20	5

PAOZZ	4730-990-9800	ELBOW, PIPE TO TUBE: filter MS39202-6 (96906)	BB, BC	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-20	6
--OZZ		TUBE ASSEMBLY: filter 10933343 (19207)	BB, BC	EA	1												C-20	7
PAOZZ	4710-231-7432	TUBE ASSEMBLY METAL: filter to chamber 10933345 (19207)	BB, BC	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-20	8
PAOZZ	5340-177-3711	CLAMP, LOOP: filter tube MS21333-16 (96906)	BB, BC	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-20	9
PAOZZ	5305-068-0500	SCREW, CAP, HEXAGON: ¼-20UNC-2A, ½ in. lg. filter tube clamp MS90725-3 (96906)	BB, BC	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-20	10
PAOZZ	5306-225-8496	SCREW, CAP, HEXAGON: 5/16-18UNC-2A, 5/8 in. lg tube bracket MS90725-31 (96906)	BB, BC	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-20	11
PAOZZ	5310-407-9566	WASHER, LOCK: 5/16 nom. size tube bracket bolt MS 35338-45 (96906)	BB, BC	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-20	12
XBOZZ		BRACKET: tube 7979851 (19207)	BB, BC	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-20	13
PAOZZ	2530-026-0200	COLLAR: chamber 8365427 (19207)		EA	1	•	•	•	•	•	•	•	•	•	•	•	C-21	1
PAOZZ	5310-732-0558	NUT, PLAIN HEXAGON: 3/8-16UNC-2B, chamber MS51967-8 (96906)		EA	3	•	•	•	•	•	•	•	•	•	•	•	C-21	2
PAOZZ	5310-637-9541	WASHER, LOCK: 3/8 nom, size chamber MS35338-46 (96906)		EA	3	•	•	•	•	•	•	•	•	•	•	•	C-21	3
PAOOZ	2530-293-5139	CHAMBER AIR ASSEMBLY: 8357981 (19207)		EA	1	•	•	•	•	•	•	•	•	•	•	•	C-21	4
PAOZZ	5310-880-7746	NUT, PLAIN, HEXAGON: 5/16-24UNF-2B chamber body MS51968-5 (96906)		EA	16	•	•	•	•	•	•	•	•	•	•	•	C-21	5
PAOZZ	5310-407-9566	WASHER, LOCK: 5/16 nom. size chamber MS35338-45 (96906)		EA	16	•	•	•	•	•	•	•	•	•	•	•	C-21	6
PAOZZ	2530-192-8928	BODY, CHAMBER AIR: chamber 7979605 (19207)		EA	1	•	•	•	•	•	•	•	•	•	•	•	C-21	7
XAOZZ		SPRING, HELICAL, COMPRESSION: chamber 7979608 (19207)			1												C-21	8
PAOZZ	5330-584-0265	PACKING, "O" RING: chamber MS28775-12 (96906)		EA	1	•	•	•	•	•	•	•	•	•	•	•	C-21	9
PAOZZ	5340-178-1441	RETAINER, HELICAL: chamber 7979610 (19207)		EA	1	•	•	•	•	•	•	•	•	•	•	•	C-21	10
XAOZZ		ROD: chamber 7979599 (19207)			1												C-21	11
PAOZZ	2530-323-8535	DIAPHRAGM, CHAMBER: chamber 7979611 (19207)		EA	1	•	•	•	•	•	•	•	•	•	•	•	C-21	12

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		1208--AIR BRAKE SYSTEM—Continued															
XAOZZ		COVER: chamber 7979602 (19207)		1												C-21	13
PAOZZ	5306-225-9088	SCREW, CAP, HEXAGON: 5/16-24UNF-2A x 7/8 in. lg chamber MS90726-33 (96906)	EA	16	*	*	*	*	*	*	*	*	*	*	*	C-21	14
PAOZZ	4730-595-0083	COUPLING HALF, QUICK: air hose MS35746-1 (96906)	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-22	1
PAOZZ	5330-090-2128	PACKING, PREFORMED: coupling MS35748-1 (96906)	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-22	2
XAOZZ		BODY: coupling 500333 (21405)		1												C-22	3
PAOZZ	2530-318-1016	HOSE, ASSEMBLY: intervehicular air 8330805 (19207)	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-22	4
PAOZZ	4730-987-9073	ADAPTER, STRAIGHT PIPE: coupling to hose MS39133-2 (96906)	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-22	5
PAOZZ	4720-238-8304	HOSE: intervehicular air 33H787125 (80244)	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-22	6
PAOZZ	5306-797-9296	BOLT, "U": filter 7979296 (19207)	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-22	7
PAOZZ	5310-582-5965	WASHER, LOCK: 1/4 nom. size filter U bolt MS35338-44 (96906)	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-22	8
PAOZZ	5310-761-6882	NUT, PLAIN, HEXAGON: 1/4-20UNC-2B filter U bolt MS51967-2 (96906)	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-22	9
PAOOZ	2530-797-9295	AIR FILTER: brake 7411022 (19207)	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-22	10
PAOZZ	2530-741-5748	BODY: air filter 7415748 (19207)	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-22	11
PAOZZ	2530-741-1081	ELEMENT: filter 7411081 (19207)	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-22	12
PAOZZ	5310-679-3606	WASHER: filter 7979614 (19207)	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-22	13
PAOZZ	2530-706-9054	SPRING, HELICAL COMPRESSION: filter 7979612 (19207)	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-22	14
PAOZZ	5330-285-5123	WASHER, NONMETALLIC: filter 8329823 (19207)	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-22	15
PAOZZ	4730-580-8457	ADAPTER, BUSHING: filter 7979613 (19207)	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-22	16

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		1301—SUSPENSION ASSEMBLY—Cont.															
PAOZZ	5315-013-7228	PIN, COTTER: ½ dia. x 1½ in. lg MS24665-423 (96906) BD, BE	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-23	18
PAOZZ	5315-679-4575	PIN, STRAIGHT HEADED: clevis 10860122 (19207) BD, BE	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-23	19
PAOZZ	5305-071-2070	SCREW, CAP, HEXAGON HEAD: clevis locking MS90728-114 (96906) BD, BE	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-23	20
PAOZZ	5305-679-8118	SCREW, ADJUSTING: clevis 10860121 (19207) BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-23	21
PAOZZ	5340-679-4570	CLEVIS, ROD END: adjusting 10860118 (19207) BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-23	22
PAOZZ	3120-679-4549	BEARING, SLEEVE: torsion spring 10860115 (19207) BD, BE	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-23	23
PAOZZ	2530-679-4537	COVER: torsion spring 10860114 (19207) BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-23	24
--OZZ		KEY, MACHINE: torsion spring cover 10860127 (19207) BD, BE	EA	2												C-23	25
PAOZZ	5305-958-5477	SCREW, MACHINE: No. 8-32UNC-2A x ⅝ in. lg torsion spring cover key MS35190-254 (96906) BD, BE	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-23	26
--OZZ		KEY, MACHINE: torsion spring cover 10860125 (19207) BD, BE	EA	2												C-23	27
PAOZZ	2530-679-4542	ARM, SUSPENSION ASSEMBLY: left 10860106 (19207) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-23	28
PAOZZ	2530-679-4541	ARM, SUSPENSION ASSEMBLY: right 10860107 (19207) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-23	28
PAOZZ	5305-269-3216	SCREW, CAP, HEXAGON: ⅜-16UNC-2A, 2 in. lg arm MS90725-66 (96906) BD, BE	EA	3	•	•	•	•	•	•	•	•	•	•	•	C-23	29
PAOZZ	2530-679-4525	GASKET: torsion spring cover 10860113 (19207) BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-23	30

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		1311—WHEEL ASSEMBLY—Continued															
PAOZZ	2530-679-4529	DRUM: brake 7973177 (19207) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-24	12
PAOZZ	5305-903-2190	SCREW, CAP, HEXAGON: hub MS35308-109 (96906) BD, BE	EA	6	•	•	•	•	•	•	•	•	•	•	•	C-24	13
PAOZZ	3110-100-3563	CONE AND ROLLER, TAPERED ROLLER BEARING: hub, inner 705472 (21450) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-24	14
PAOZZ	5330-154-8353	SEAL, PLAIN: hub 500174 (21450) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-24	15
PAOZZ	5365-260-4882	RING, RETAINING: hub seal MS16625-1387 (96906) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-24	16
PAOZZ	5306-733-9239	BOLT, RIBBED SHOULDERED: hub, left hand 7339239 (19207) BD, BE	EA	6	•	•	•	•	•	•	•	•	•	•	•	C-24	17
PAOZZ	5306-866-0038	BOLT, RIBBED SHOULDERED: hub, right hand 7339238 (19207) BD, BE	EA	6	•	•	•	•	•	•	•	•	•	•	•	C-24	17
PAOZZ	5310-518-5566	NUT, SELF-LOCKING: wheel hub, left hand MS51983-1 (96906) BD, BE	EA	6	•	•	•	•	•	•	•	•	•	•	•	C-24	18
PAOZZ	5310-594-8038	NUT, SELF-LOCKING: wheel hub, right hand MS51983-2 (96906) BD, BE	EA	6	•	•	•	•	•	•	•	•	•	•	•	C-24	18
PAOZZ	5310-982-4908	NUT, SELF-LOCKING HEXAGON: drum MS21045-6 (96906) BD, BC	EA	16	•	•	•	•	•	•	•	•	•	•	•	C-25	1
PAOZZ	5310-080-6004	WASHER, FLAT: 1⅛ nom. size drum MS27183-14 (96906) BB, BC	EA	16	•	•	•	•	•	•	•	•	•	•	•	C-25	2
PAOZZ	2530-741-1425	BRAKE, DRUM: 7411425 (19207) BB, BC	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-25	3
PAOZZ	2530-741-3231	BACK, FRONT BRAKE: drum 7413231 (19207) BB, BC	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-25	4
PAOZZ	5306-335-4768	BOLT, RIBBED NECK: drum 8720025 (19207) BB, BC	EA	16	•	•	•	•	•	•	•	•	•	•	•	C-25	5
PAOZZ	5306-206-1560	BOLT, RIBBED SHOULDERED: drum back 8333780 (19207) BB, BC	EA	6	•	•	•	•	•	•	•	•	•	•	•	C-25	6

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		1313—TIRES, TUBES, TIRE CHAINS															
PAOZZ	2610-269-7383	INNER, TUBE PNEUMATIC: MS35392-13 (96906)	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-27	1
PAOFH	2610-262-8677	TIRE, PNEUMATIC: MS35388-16 (96906)	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-27	2
PAOZZ	2640-555-2843	VALVE, PNEUMATIC TIRE: MS51371-1 (96906)	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-27	3
PAOZZ	2640-060-3550	CAP: pneumatic valve MS51375-1 (96906)	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-27	4
		GROUP 15—FRAME, TOWING ATTACHMENTS, DRAWBARS, AND ARTICULATION SYSTEMS															
		1501—FRAME ASSEMBLY															
PAOZZ	5310-982-5042	NUT, PLAIN, WING: ½-20UNF-2B ground bar clamp MS35426-11 (96906) BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-28	1
PAOZZ	5310-834-7606	WASHER, LOCK: ground bar clamp MS35340-48 (96906) BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-28	2
PAOZZ	5310-809-3079	WASHER, FLAT: ground ⅝ nom. size ground bar clamp MS27183-19 (96906) BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-28	3
PAOZZ	5315-732-8934	PIN, LOCK: shackle pin 7328934 (19207) BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-28	4
PAOZZ	4030-076-1924	SHACKLE: lifting 9070061 (19207) BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-28	5
PAOZZ	5315-079-9489	PIN, STRAIGHT, HEADED: ⅝ dia., x 4 19/64 in. lg shackle MS20392-9C127 (96906) BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-28	6
XAFZZ		FRAME: 8739900 (19207) BD		1												C-28	7
XAFZZ		FRAME: 8759940 (19207) BE		1												C-28	7
XBOZZ		SUPPORT: 8740112 (19207) BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-28	8
PAOZZ	4730-172-0081	FITTING, LUBRICATION: support MS15003-5 (96906) BD, BE	EA	8	•	•	•	•	•	•	•	•	•	•	•	C-28	9

XBOZZ		SUPPORT: left															

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		1501—FRAME ASSEMBLY—Continued																
PAOZZ	5310-891-1709	NUT, PLAIN, HEXAGON: jam, 5/16-18UNC-2B safety chain MS35691-9 (96906)	BB	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-29	11
PAOZZ	5306-177-5525	BOLT, RING: safety chain 10914368 (19207)	BB	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-29	12
PAOZZ	5310-407-9566	WASHER, LOCK: 5/16 nom. size safety chain MS35338-45 (96906)	BB	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-29	13
PAOZZ	5310-880-7744	NUT, PLAIN HEXAGON: 5/16-18UNC-2B safety chain MS51967-5 (96906)	BB	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-29	14
PAOZZ	5305-071-2241	SCREW, CAP, HEXAGON: 1/4-20UNC-2A, 1 1/4 in. lg safety chain MS90725-10 (96906)	BB	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-29	15
PAOZZ	2510-179-5664	STEP, RETRACTABLE: 10891245 (19207)	BB	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-29	16
PAOZZ	5315-012-0123	PIN, COTTER: shackle 1/8 dia. 1 1/4 in. lg, shackle MS24665-355 (96906)	BB	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-29	17
PAOZZ	5310-809-8533	WASHER, FLAT: 13/16 nom. size shackle MS27183-23 (96906)	BB, BC	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-29	18
PAOZZ	5310-763-8921	NUT, PLAIN HEXAGON: 3/4-10UNC-2B shackle MS51967-23 (96906)	BB, BC	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-29	19
PAOZZ	4030-075-7212	SHACKLE: tie down 10891283 (19207)	BB, BC	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-29	20
PAOZZ	5306-075-7215	BOLT, MACHINE: shackle 10891284 (19207)	BB, BC	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-29	21
XBOZZ		LATCH: ladder 8364004 (19207)	BB, BC	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-29	22
PAOZZ	5310-080-6004	WASHER, FLAT: 13/32 nom. size ladder MS27183-14 (96906)	BB, BC	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-29	23
XBOZZ		SCREW: ladder 127670 (21450)	BB, BC	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-29	24
XBOZZ		SPRING: ladder 8364009 (19207)	BB, BC	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-29	25
XBOZZ		WASHER: ladder	BB, BC	EA														

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		1507—LANDING GEAR, LEVELING JACKS—Continued															
PAOZZ	4010–165–6059	CHAIN, WELDED: gravity chain 42C14854–215 (80244) BD, BE	LK	V	•	•	•	•	•	•	•	•	•	•	•	C–31	4
PAOZZ	2530–679–4535	PIN, RETAINING: gravity chain 8740191 (19207) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C–31	5
PAOZZ	5305–050–1077	SCREW, CAP, HEXAGON: ½–13UNC–2A, 2¾ in. lg mounting MS90725–118 (96906) BD, BE	EA	4	•	•	•	•	•	•	•	•	•	•	•	C–31	6
PAOZZ	5310–809–5998	WASHER, FLAT: 1½ nom size mounting MS27183–18 (96906) BD, BE	EA	4	•	•	•	•	•	•	•	•	•	•	•	C–31	7
PAOZZ	5310–834–7606	WASHER, LOCK: ½ nom size mounting MS35340–48 (96906) BD, BE	EA	4	•	•	•	•	•	•	•	•	•	•	•	C–31	8
PAOZZ	5310–768–0318	NUT, PLAIN, HEXAGON: ½–13UNC–2B mounting MS51967–14 (96906) BD, BE	EA	4	•	•	•	•	•	•	•	•	•	•	•	C–31	9
PAOZZ	2530–679–4538	SUPPORT, RETRACTABLE ASSEMBLY: 8364023 (19207) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C–31	10
PAOZZ	5315–076–3505	PIN, STRAIGHT HEADLESS: support 8364026 (19207) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C–31	11
XAOZZ		SUPPORT: leg 8364024 (19207) BD, BE		1												C–31	12
PAOZZ	5315–679–4565	PIN, STRAIGHT HEADED: support 8364033 (19207) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C–31	13
PAOZZ	2530–679–4817	SPRING, HELICAL: support pin 8364027 (19207) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C–31	14
PAOZZ	5315–844–3665	PIN, SPRING: swivel MS16562–68 (96906) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C–31	15
PAOZZ	2590–076–1937	SWIVEL, JACK LANDING: leg 8364032 (19207) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C–31	16
XAOZZ		SUPPORT: wheel 8364031 (19207) BD, BE		1												C–31	17
PAOZZ	5315–844–5833	PIN, SPRING: support BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C–31	18

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		1507—LANDING GEAR, LEVELING JACKS—Continued															
PAFZZ	2590-670-1997	HANDLE: support 7979974 (19207) BB, BC	EA	1					•	•	•	•	•	•	•	C-32	6
PAFZZ	2530-699-8489	SPRING, HELICAL: leg 8331541 (19207) BB, BC	EA	2					•	•	•	•	•	•	•	C-32	7
PAFZZ	5310-693-0738	WASHER, RECESSED: leg 8331542 (19207) BB, BC	EA	2					•	•	•	•	•	•	•	C-32	8
PAFZZ	5315-536-3865	PIN, STRAIGHT: leg 7979971 (19207) BB, BC	EA	2					•	•	•	•	•	•	•	C-32	9
PAFZZ	5310-241-6661	NUT, SELF-LOCKING: leg MS51943-42 (96906) BB, BC	EA	1					•	•	•	•	•	•	•	C-32	10
PAFZZ	5305-269-2807	SCREW, CAP, HEXAGON: arm 3/8-24 UNF-2A 1½ in. lg MS90726-64 (96906) BB, BC	EA	1					•	•	•	•	•	•	•	C-32	11
PAFZZ	5310-431-7435	WASHER, FLAT: arm 7032134 (19207) BB, BC	EA	1					•	•	•	•	•	•	•	C-32	12
PAFZZ	5310-407-9566	WASHER, LOCK: 5/16 nom size MS35338-45 (96906) BB, BC	EA	1					•	•	•	•	•	•	•	C-32	13
PAFZZ	5306-225-8497	SCREW, CAP, HEXAGON: 5/16-18UNC-2A ¾ in. lg arm MS90725-32 (96906) BB, BC	EA	1					•	•	•	•	•	•	•	C-32	14
PAFZZ	2590-725-5270	ARM, HAND CRANK: 7032135 (19207) BB, BC	EA	1					•	•	•	•	•	•	•	C-32	15
PAFZZ	2590-937-5286	HANDLE, ASSEMBLY: arm 7032136 (19207) BB, BC	EA	1					•	•	•	•	•	•	•	C-32	16
PAFZZ	5305-761-4227	SCREW, CAP, HEXAGON: ½-20UNF-2A 1¼ in. lg frame MS90726-111 (96906) BB, BC	EA	4					•	•	•	•	•	•	•	C-32	17
PAFZZ	5310-590-7893	NUT, SELF-LOCKING: arm 454634 (19207) BB, BC	EA	1					•	•	•	•	•	•	•	C-32	18
PAFZZ	2590-177-8306	FRAME, ASSEMBLY: leg 7032128 (19207) BB, BC	EA	1					•	•	•	•	•	•	•	C-32	19
PAFZZ	5306-174-4246	BOLT, SHOULDERED: frame 7979972 (19207) BB, BC	EA	1					•	•	•	•	•	•	•	C-32	20
PAFZZ	2530-860-0527	SUPPORT, RETRACTABLE: leg 7032188 (19207) BB, BC	EA	1					•	•	•	•	•	•	•	C-32	21
PAOZZ	4730-172-0634	FITTING, LUBRICA- BB, BC	EA														

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(1) SMR code	(2) Federal stock number	(3) Description / Reference number & mfr. code / Usable on code	(4) Unit of meas	(5) Qty inc in unit	(6) 15-day organization maintenance allowance (a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(7) 30-day DS maintenance allowance (a) 1-20	(b) 21-50	(c) 51-100	(8) 30-day GS maintenance allowance (a) 1-20	(b) 21-50	(c) 51-100	(9) 1 yr slw per 100 equip cntgcy	(10) Illustration (a) Figure No.	(b) Item No.
		1507—LANDING GEAR, LEVELING JACKS—Continued															
PAOZZ	2590-861-7083	INSERT: leveling jack yoke 8759865 (19207) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-33	2
PAOZZ	2590-076-1944	YOKE: leveling jack 10906399 (19207) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-33	3
PAOZZ	2590-887-9529	COVER: leveling jack screw 8739876 (19207) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-33	5
PAOZZ	5365-168-2762	SPACER: leveling jack support 10860091 (19207) BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-33	6
PAOZZ	5310-761-6882	NUT, PLAIN HEXAGON: ¼-20UNC-2B jack support MS51967-2 (96906) BD, BE	EA	10	•	•	•	•	•	•	•	•	•	•	•	C-33	7
PAOZZ	5310-582-5965	WASHER, LOCK: ¼ nom size jack support MS35338-44 (96906) BD, BE	EA	10	•	•	•	•	•	•	•	•	•	•	•	C-33	8
PAOZZ	2590-076-1948	SUPPORT ASSEMBLY: front jack 10914247 (19207) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-33	9
PAOZZ	2590-076-1949	SUPPORT ASSEMBLY: rear jack 10933282 (19207) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-33	9
PAOZZ	5305-225-3839	SCREW, CAP, HEXAGON HEAD: front jack cover, ¼-20UNC-2A 1.000 in. lg MS90725-8 (96906) BD, BE	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-33	10
PAOZZ	5305-071-2242	SCREW, CAP, HEXAGON HEAD: rear jack cover, ¼-20UNC-2A 1⅛ in. lg MS90725-9 (96906) BD, BE	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-33	10
PAOZZ	2590-679-4524	GASKET: jack screw cover 8739881 (19207) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-33	11
PAFZZ	2590-796-2622	JACK, LEVELING, SUPPORT VEHICLE: 8759746 (19207) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-33	12
XAFZZ		PLATE: jack 8739883 (19207) BD, BE		1												C-33	13
PAFZZ	2590-679-4507	SLEEVE: jack screw 7341463 (19207) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-33	14
PAFZZ	2590-796-2621	SCREW: leveling jack 10860938 (19207) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-33	15
PAFZZ	5305-958-5246	SCREW, MACHINE: BD, BE	EA														

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		1507—LANDING GEAR, LEVELING JACKS—Continued															
PAOZZ	5305-269-3215	SCREW, CAP, HEXAGON: 3/8-16UNC-2A 1 3/4 in. lg, handle bar bracket support (1), rear jack (4), front jack (8) MS90725-65 (96906) BD, BE	EA	13	*	*	*	*	*	*	*	*	*	*	*	C-33	33
PAOZZ	5310-732-0558	NUT, PLAIN HEXAGON: 3/8-16UNC-2B MS51967-8 (96906) BD, BE	EA	1	*	*	*	*	*	*	*	*	*	*	*	C-33	34
PAOZZ	5310-080-6004	WASHER, FLAT: 13/32 nom size, front jack (8), rear jack (4) MS27183-14 (96906) BD, BE	EA	12	*	*	*	*	*	*	*	*	*	*	*	C-33	35
PAOZZ	2590-861-7082	PLUNGER, LEVELING: jack, retractor 8759860 (19207) BD, BE	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-33	36
--OZZ		SPRING, HELICAL, COMPRESSION: retractor plunger return 8759859 (19207) BD, BE	EA	2												C-33	37
PAOZZ	2590-861-7081	RETAINER, SPRING: retractor 8759823 (19207) BD, BE	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-33	38
PAOZZ	2590-679-4521	RETRACTOR: plunger, leveling jack lock 8740175 (19207) BD, BE	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-33	39
PAOZZ	5310-067-6356	NUT, SELF-LOCKING, HEXAGON: 3/4-10UNC pivot locking stud MS51922-57 (96906) BD, BE	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-33	40
PAOZZ	5310-809-8533	WASHER, FLAT: 13/32 nom size, pivot locking stud MS27183-23 (96906) BD, BE	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-33	41
PAOZZ	2590-861-7076	STUD: pivot locking 8759867 (19207) BD, BE	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-33	42
PAOZZ	2590-861-7078	CASE, LEVELING JACK SUPPORT: 10906407 (19207) BD, BE	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-33	43
PAOZZ	5315-543-3923	PIN, STRAIGHT, HEADLESS: leveling jack support 544160 (21450) BD, BE	EA	4	*	*	*	*	*	*	*	*	*	*	*	C-33	44
PAFZZ	2590-125-3795	SUPPORT: front jack 10914245 (19207) BD, BE	EA	2	*	*	*	*	*	*	*	*	*	*	*	C-33	35
XBFZZ		SUPPORT: rear jack BD, BE															

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		1507—LANDING GEAR, LEVELING JACKS—Continued															
PAFZZ	3110-198-1277	BEARING, BALL, THRUST: worm gear, thrust 8675963 (19207) BD, BE	EA	1					•	•	•	•	•	•	•	C-34	7
XBFZZ		SUPPORT: gear box 8739797 (19207) BD, BE	EA	1					•	•	•	•	•	•	•	C-34	8
PAFZZ	5310-514-6674	WASHER, LOCK: external tooth, 5/16 nom size, support screws MS35335-34 (96906) BD, BE	EA	8					•	•	•	•	•	•	•	C-34	9
PAFZZ	5310-880-7744	NUT, PLAIN, HEXAGON: 5/16-18UNC-2B gear box MS51967-5 (96906) BD, BE	EA	8					•	•	•	•	•	•	•	C-34	10
--OZZ		BEARING, BALL, ANNULAR: driven shaft 700243 (21450) BD, BE	EA	2					•	•	•	•	•	•	•	C-34	11
PAFZZ	5315-616-5505	KEY, WOODRUFF: shaft MS35756-101 (96906) BD BE	EA	1					•	•	•	•	•	•	•	C-34	12
PAFZZ	5315-616-5524	KEY, WOODRUFF: shaft MS35756-10 (96906) BD, BE	EA	1					•	•	•	•	•	•	•	C-34	13
PAFZZ	2590-076-1939	SHAFT, SHOULDERED: leg leveling 8740168 (19207) BD, BE	EA	1					•	•	•	•	•	•	•	C-34	14
PAFZZ	2590-679-4488	GEAR, WORM: shaft 8739794 (19207) BD, BE	EA	1					•	•	•	•	•	•	•	C-34	15
XBFZZ		SPACER: shaft gear 8739787 (19207) BD, BE	EA	1					•	•	•	•	•	•	•	C-34	16
PAFZZ	2590-679-4814	GEAR, SPUR: shaft 8739792 (19207) BD, BE	EA	1					•	•	•	•	•	•	•	C-34	17
PAFZZ	5310-679-4558	WASHER, SHOULDERED: shaft gear 8739786 (19207) BD, BE	EA	6					•	•	•	•	•	•	•	C-34	18
PAFZZ	5305-983-6622	SCREW, CAP SOCKET: 5/16-18UNC-3A 1¼ in. lg, box cover MS16997-81 (96906) BD, BE	EA	1					•	•	•	•	•	•	•	C-34	19
XBFZZ		COVER: gear box 8740166 (19207) BD, BE	EA	1					•	•	•	•	•	•	•	C-34	20
PAFZZ	2590-679-4485	GASKET: cover 8740167 (19207) BD, BE	EA	1					•	•	•	•	•	•	•	C-34	21
PAFZZ	3110-516-5850	BEARING, BALL: drive gear outer 6204ZJ (52676) BD, BE	EA	1					•	•	•	•	•	•	•	C-34	22

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		1507—LANDING GEAR, LEVELING JACKS—Continued															
PAFZZ	3120-433-4633	BEARING, SLEEVE: left and right 10860065 (19207) BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-36	2
PAFZZ	3120-861-7080	BEARING, SLEEVE: left and right 1089978 (19207) BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-36	3
XAFZZ		SUPPORT: leveling jack, front 10906396 (19207) BD, BE		1												C-36	4
PAOFZ	2590-895-7307	SUPPORT: leveling jack, left rear 10890069 (19207) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-36	5
XAFZZ		SUPPORT: leveling jack left 109063967 (19207) BD, BE		1												C-36	6
PAOZZ	5310-982-4908	NUT, SELF-LOCKING: mounting MS21045-6 (96906) BD, BE	EA	16	•	•	•	•	•	•	•	•	•	•	•	C-36	7
PAOZZ	5310-080-6004	WASHER, FLAT: 13/16 nom size mounting MS27183-14 (96906) BD, BE	EA	16	•	•	•	•	•	•	•	•	•	•	•	C-36	8
PAOZZ	5306-206-2865	BOLT, MACHINE: mounting 7601628 (19207) BD, BE	EA	12	•	•	•	•	•	•	•	•	•	•	•	C-36	9
--OZZ		WASHER, FLAT: 13/16 nom size MS15795-714 (96906) BD, BE	EA	16												C-36	10
PAOZZ	2530-929-8927	SHIM: mounting 8759769 (19207) BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-36	11
PAOZZ	5306-180-1485	BOLT, CAP, HEXAGON: mounting 7415340 (19207) BD, BE	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-36	12
PAOZZ	5310-761-6882	NUT, PLAIN HEXAGON: 1/4-20UNC-2B mounting MS51967-2 (96906) BD, BE	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-37	1
PAOZZ	5310-582-5965	WASHER, LOCK: 1/4 nom size mounting MS35338-44 (96906) BD, BE	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-37	2
PAOZZ	5310-809-4058	WASHER, FLAT: 5/16 nom size mounting MS27183-10 (96906) BD, BE	EA	8	•	•	•	•	•	•	•	•	•	•	•	C-37	3
PAOZZ	2590-076-1945	PAD ASSEMBLY: jack tiedown 10906418 (19207) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-37	4
PAOZZ	2590-421-1587	BRACKET, PAD: tie down 10906415 (19207) BD, BE	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-37	5
PAOZZ	5330-679-4583	RUBBER, STRIP: tie down															

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		1507—LANDING GEAR, LEVELING JACKS—Continued															
PAFZZ	5305–984–4983	SCREW, MACHINE: No. 6–32UNC–2A ¼ in. lg, housing MS35206–226 (96906) — BB, BC	EA	2					•	•	•	•	•	•	•	C–38	16
PAFZZ	2590–076–1943	COVER: key 10885448 (19207) — BB, BC	EA	1					•	•	•	•	•	•	•	C–38	17
PAFZZ	2590–860–0532	KEY, HOUSING LEVELING: housing 10885443 (19207) — BB, BC	EA	1					•	•	•	•	•	•	•	C–38	18
PAFZZ	2590–076–0049	HOUSING: leveling jack 10885476 (19207) — BB, BC	EA	1					•	•	•	•	•	•	•	C–38	19
PAFZZ	2590–899–5216	BEARING, SLEEVE: pinion shaft (early model) 8683896 (19207) — BB, BC	EA	1					•	•	•	•	•	•	•	C–38	20
PAFZZ	3110–752–0775	BEARING: pinion shaft (late model) 7520775 (19207) — BB, BC	EA	1					•	•	•	•	•	•	•	C–38	21
PAFZZ	5315–018–7851	PIN, GROOVED HEADLESS: housing bearing (late model) 137851 (21450) — BB, BC	EA	1					•	•	•	•	•	•	•	C–38	22
PAOZZ	4730–050–4208	FITTING, LUBRICANT: housing MS15003–1 (96906) — BB, BC	EA	1	•	•	•	•	•	•	•	•	•	•	•	C–38	23
--OZZ		SPACER: bevel gear 7328405 (19207) — BB, BC	EA	1												C–38	24
PAFZZ	2590–571–6104	GEAR, BEVEL: leveling jack 7520774 (19207) — BB, BC	EA	1					•	•	•	•	•	•	•	C–38	25
PAFZZ	3110–142–4351	CONE AND ROLLER, TAPERED ROLLER BEARING: bevel gear 705527 (21450) — BB, BC	EA	1					•	•	•	•	•	•	•	C–38	26
PAFZZ	2590–860–0536	GEARSHAFT ASSEMBLY: bevel gear 10885478 (19207) — BB, BC	EA	1					•	•	•	•	•	•	•	C–38	27
XAFZZ		PINION: gearshaft 7520829 (19207) — BB, BC		1												C–38	28
XAFZZ		SPRING: gearshaft 7696416 (19207) — BB, BC		1													

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		1507—LANDING GEAR, LEVELING JACKS—Continued															
PAFZZ	5310-732-0558	NUT, PLAIN, HEXAGON: ⅜-16UNC-2B swivel handle locking screw MS51967-8 (96906) BB	EA	1					•	•	•	•	•	•	•	C-39	12
PAFZZ	2590-076-0044	HANDLE, LOCKING, LEVELING, JACK: 10885453 (19207) BB	EA	1					•	•	•	•	•	•	•	C-39	13
PAFZZ	5305-269-3216	SCREW, CAP, HEXAGON HEAD: ⅜-16UNC-2A x 2 in. lg swivel handle locking MS90725-66 (96906) BB	EA	1					•	•	•	•	•	•	•	C-39	14
PAFZZ	5305-724-7223	SCREW, CAP, HEXAGON HEAD: support housing retaining MS90728-165 (96906) BB	EA	6					•	•	•	•	•	•	•	C-39	15
PAFZZ	5310-820-6653	WASHER, LOCK: ⅜ nom size support housing retaining MS35338-50 (96906) BB	EA	6					•	•	•	•	•	•	•	C-39	16
PAFZZ	5305-225-8494	SCREW, CAP, HEXAGON HEAD: 5/16-18UNC-2A x ½ in. lg support MS90725-29 (96906) BB	EA	2					•	•	•	•	•	•	•	C-39	17
PAFZZ	5310-081-4219	WASHER, FLAT: 11/32 nom size support MS27183-12 (96906) BB	EA	2					•	•	•	•	•	•	•	C-39	18
--OZZ		NUT, SELF-LCOKING, HEXAGON: locking lever 7984623 (19207) BB		1												C-39	19
PAFZZ	5310-080-6004	WASHER, FLAT: 13/32 nom size locking lever MS27183-14 (96906) BB	EA	1					•	•	•	•	•	•	•	C-39	20
PAFZZ	2590-860-0524	SPRING, HELICAL, COMPRESSION: locking lever 8683898 (19207) BB, BC	EA	1					•	•	•	•	•	•	•	C-39	21
PAFZZ	3120-899-1355	BEARING: swivel support plate 10885445 (19207) BB, BC	EA	1					•	•	•	•	•	•	•	C-39	22
AOZdZ	2590-871-2881	SHIM: pilot to bracket 5703039 (19207) BB, BC	EA	1					•	•	•	•	•	•	•	C-39	23
PAFZZ	2590-076-0043	CAP, BRACKET, LEVELING JACK: 8683881 (19207) BB, BC	EA	1					•	•	•	•	•	•	•	C-39	24

PAFZZ	5310-584-5272	WASHER, LOCK: ¼ nom size															

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		1507—LANDING GEAR, LEVELING JACKS—Continued																
PAFZZ	5310-407-9566	WASHER, LOCK: 5/16 nom size support cover screw MS35338-45 (96906)	BB, BC	EA	6					•	•	•	•	•	•	•	C-40	12
PAFZZ	5306-225-8496	SCREW, CAP, HEXAGON HEAD: 5/16-18UNC-2A x 5/8 in. lg support cover MS90725-31 (96906)	BB, BC	EA	6					•	•	•	•	•	•	•	C-40	13
PAFZZ	5310-732-0558	NUT, PLAIN, HEXAGON: 3/8-16UNC-2B support swivel handle, retaining MS51967-8 (96906)	BB, BC	EA	2					•	•	•	•	•	•	•	C-40	14
PAFZZ	5310-637-9541	WASHER, LOCK: 3/8 nom size swivel lever bolt (4), locking lever (2) MS35338-46 (96906)	BB, BC	EA	6					•	•	•	•	•	•	•	C-40	15
PAFZZ	5305-269-3216	SCREW, CAP, HEXAGON HEAD: 3/8-16UNC-2A x 2 in. lg support swivel handle MS90725-66 (96906)	BB, BC	EA	2					•	•	•	•	•	•	•	C-40	16
PAFZZ	2590-076-0044	HANDLE, LOCKING, LEVELING JACK: 10885453 (19207)	BB, BC	EA	2					•	•	•	•	•	•	•	C-40	17
PAFZZ	5305-724-7223	SCREW, CAP, HEXAGON HEAD: support housing plate MS90728-165 (96906)	BB, BC	EA	12					•	•	•	•	•	•	•	C-40	18
PAFZZ	5305-225-8494	SCREW, CAP, HEXAGON HEAD: 5/16-18UNC-2A x 1/2 in. lg swivel support plate MS90725-29 (96906)	BB, BC	EA	2					•	•	•	•	•	•	•	C-40	19
--OZZ		WASHER, FLAT: 11/32 nom size swivel support plate MS27183-12 (96906)	BB, BC	EA	2												C-40	20
PAFZZ	2590-076-0048	LEVER, LOCKING, LEVELING JACK: double swivel support 10885466 (19207)	BB, BC	EA	1					•	•	•	•	•	•	•	C-40	21
PAFZZ	2590-860-0524	SPRING, HELICAL, COMPRESSION: leveling jack support assembly 8683898 (19207)	BB, BC	EA	2					•	•	•	•	•	•	•	C-40	22

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		1601—SPRINGS—Continued															
PAOZZ	2510-679-3160	PIN, ROLLER CHASSIS: leaf 8363973 (19207) BB, BC	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-41	9
PAOZZ	5305-728-6291	SETSCREW: leaf pin MS51973-74 (96906) BB, BC	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-41	10
PAOZZ	5305-655-9425	SCREW, CAP, HEXAGON HEAD: leaf retaining 595479 (21450) BB, BC	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-41	11
PAOOZ	2510-679-3681	SPRING ASSEMBLY: 8363955 (19207) BB, BC	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-41	12
PAOZZ	5310-732-0560	NUT, PLAIN HEXAGON: center bolt MS51968-14 (96906) BB, BC	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-41	13
PAOZZ	2510-679-3682	PLATE: spring leaf 8363966 (19207) BB, BC	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-41	14
PAOZZ	5305-655-9404	SCREW, MACHINE: center 8363968 (19207) BB, BC	EA	1	•	•	•	•	•	•	•	•	•	•	•	C-41	15
PAOZZ	5306-655-9403	BOLT, "U": mounting 8363974 (19207) BB, BC	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-41	16
PAOZZ	5306-679-4573	BOLT, SHOULDER: mounting 10860124 (19207) BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-42	1
PAOZZ	5310-679-4574	WASHER, FLAT: mounting 10860123 (19207) BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-42	2
PAOZZ	5340-679-4580	BUSHING, RUBBER: mounting bolt 7341462 (19207) BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-42	3
PAOZZ	2540-679-4519	SHOCK ABSORBER: 7092048 (19207) BD, BE	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-42	4
		1605—TORQUE, RADIUS AND STABILIZER RODS															
PAOZZ	5310-835-2037	NUT, PLAIN, HEXAGON: (jam) 5/8-18UNF-2B, mounting MS35691-53 (96906) BB, BC	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-43	1
PAOZZ	5310-763-8905	NUT, PLAIN: mounting MS51968-20 (96906) BB, BC	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-43	2
PAOZZ	2530-693-0566	RETAINER, PACKING: mounting 7349028 (19207) BB, BC	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-43	3
PAOZZ	5340-350-0155	BUSHING, RUBBER: mounting 7974916 (19207) BB, BC	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-42	4

PAOZZ | 5310-424-1456 | WASHER, [illegible]

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(1) SMR code	(2) Federal stock number	(3) Description / Reference number ▲ mfr. code / Usable on code	(4) Unit of meas	(5) Qty inc in unit	(6) 15-day organization maintenance allowance (a) 1–5	(b) 6–20	(c) 21–50	(d) 51–100	(7) 30-day DS maintenance allowance (a) 1–20	(b) 21–50	(c) 51–100	(8) 30-day GS maintenance allowance (a) 1–20	(b) 21–50	(c) 51–100	(9) 1 yr slw per 100 equip cntgcy	(10) Illustration (a) Figure No.	(b) Item No.
		(1801—BODY—Continued)															
PAOZZ	5330-075-9150	GASKET: tool box lid 9759653 (19207) BD	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-46	3
--OZZ		GASKET: tool box lid 9759654 (19207) BD	EA	2												C-46	4
PAOZZ	5305-269-3209	SCREW, CAP, HEXAGON: ⅜-16UNC-2A x ¾ in. lg mounting MS90725-58 (96906) BD	EA	6	•	•	•	•	•	•	•	•	•	•	•	C-46	5
PAOZZ	5310-637-9541	WASHER, LOCK: ⅜ nom size mounting MS35338-46 (96906) BD	EA	6	•	•	•	•	•	•	•	•	•	•	•	C-46	6
PAOZZ	5310-732-0558	NUT, PLAIN, HEXAGON: ⅜-16UNC-2B, mounting MS51967-8 (96906) BD	EA	6	•	•	•	•	•	•	•	•	•	•	•	C-46	7
XBOZZ		SPACER: clamp 10860050 (19207) BD	EA	2	•	•	•	•	•	•	•	•	•	•		C-46	8
PAOZZ	2590-692-9212	CLAMP ASSEMBLY: 7064602 (19207) BD	EA	2	•	•	•	•	•	•	•	•	•	•	•	C-46	9
--OZZ		RIVET: clamp 588463 (21450) BD	EA	2												C-46	10
		GROUP 22—BODY, CHASSIS, AND HULL ACCESSORY ITEMS															
		2202—ACCESSORY ITEMS															
PAOZZ	9905-202-3639	REFLECTOR, INDICATING: amber MS35387-2 (96906) BB, BC	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-47	1
PAOZZ	9905-205-2795	REFLECTOR, INDICATING: red MS35387-1 (96906) BD BB, BC	EA	2 4	•	•	•	•	•	•	•	•	•	•	•	C-47	1
PAOZZ	5310-550-1130	WASHER, LOCK: internal tooth ¼ nom size, mounting MS35333-40 (96906) BB, BC	EA	16	•	•	•	•	•	•	•	•	•	•	•	C-47	2
PAOZZ	5305-988-1721	SCREW, MACHINE: ¼-20UNC-2A x ⅜ in. lg, mounting MS35206-277 (96906) BB, BC	EA	16	•	•	•	•	•	•	•	•	•	•	•	C-47	3
PAOZZ	5305-655-9572	SCREW, TAPPING: mounting 171764 (21450) BD	EA	4	•	•	•	•	•	•	•	•	•	•	•	C-47	3

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Section III. SPECIAL TOOLS

(1) SMR code	(2) Federal stock number	(3) Description Reference number & mfr. code — Usable on code	(4) Unit of meas	(5) Qty inc in unit	(6) 15-day organization maintenance allowance (a) 1-5	(b) 6-20	(c) 21-50	(d) 51-100	(7) 30-day DS maintenance allowance (a) 1-20	(b) 21-50	(c) 51-100	(8) 30-day GS maintenance allowance (a) 1-20	(b) 21-50	(c) 51-100	(9) 1 yr slw per 100 equip entgcy	(10) Illustration (a) Figure No.	(b) Item No.
		GROUP 26—TOOLS															
		2604—SPECIAL TOOLS															
PEOFF	5120-711-8418	WRENCH: wheel bearing adjusting nut 7059814 (19207) BD, BE	EA	1	1	1	1	1	1	1	1	1	1	1	1	C-49	1
PEOFF	5120-795-0946	WRENCH: wheel bearing adjusting nut 7950946 (19207) BB, BC	EA	1	1	1	1	1	1	1	1	1	1	1	1	C-49	1

Section IV. FEDERAL STOCK NUMBER AND REFERENCE NUMBER INDEX

Federal Stock Number Cross-Reference to Figure and Item Number

Stock No.	Figure No.	Item No.
1015-614-4454	C-25	19
1440-331-2334	C-32	26
1440-341-2387	C-38	12
1440-341-2388	C-32	27
1440-677-0202	C-25	11
1440-689-6160	C-18	9
1440-798-4812	C-13	4
1440-798-4824	C-13	4
1440-994-8975	C-13	13
2510-075-9148	C-43	6
2510-179-5664	C-29	16
2510-679-3159	C-41	7
2510-679-3160	C-41	9
2510-679-3681	C-41	12
2510-679-3682	C-41	14
2510-861-7077	C-28	16
2530-026-0200	C-21	1
2530-026-0265	C-26	1
2530-074-2357	C-12	10
2530-092-9641	C-11	20
2530-092-9642	C-11	19
2530-133-9830	C-13	12
2530-133-9831	C-13	12
2530-135-9031	C-11	1
2530-159-8755	C-13	5
2530-159-8756	C-13	5
2530-169-5727	C-9	7
2530-169-5741	C-9	7
2530-177-8207	C-11	1
2530-192-8928	C-21	7
2530-204-2212	C-31	28
2530-204-4800	C-18	6
2530-274-4510	C-17	2
2530-293-5139	C-21	4
2530-318-1016	C-22	4
2530-318-1115	C-17	1
2530-318-1116	C-17	1
2530-322-7261	C-12	14
2530-323-8535	C-21	12
2530-330-3262	C-9	8
	C-10	13
2530-443-0033	C-11	23
2530-511-1692	C-18	5
2530-522-1157	C-12	17
2530-522-4183	C-12	21
2530-566-7133	C-16	11
2530-566-7134	C-16	13
2530-630-9928	C-16	13
2530-633-7972	C-11	4
2530-678-4086	C-11	24
2530-679-3162	C-15	1
2530-679-3163	C-15	12
2530-679-3678	C-10	8
2530-679-3679	C-15	14
2530-679-3683	C-8	1
2530-679-4486	C-14	8
2530-679-4506	C-9	12
2530-679-4508	C-31	21
2530-679-4511	C-14	11
2530-679-4514	C-23	31
2530-679-4515	C-9	17
2530-679-4523	C-24	3
2530-679-4525	C-23	30
2530-679-4528	C-23	8
2530-679-4529	C-24	12
2530-679-4534	C-24	4
2530-679-4535	C-31	5
2530-679-4537	C-23	24
2530-679-4538	C-31	10
2530-679-4540	C-23	9
2530-679-4541	C-23	28
2530-679-4542	C-23	28
2530-679-4543	C-24	10
2530-679-4544	C-23	9
2530-679-4817	C-31	14
2530-693-0566	C-43	3
2530-693-0736	C-32	5
2530-693-1007	C-12	19
2530-693-1010	C-25	10
2530-699-8489	C-32	7
2530-706-9054	C-22	14
2530-737-3260	C-16	8
2530-738-9061	C-26	2
2530-738-9620	C-26	3
2530-741-1081	C-22	12
2530-741-1425	C-25	3
2530-741-1433	C-25	7
2530-741-1903	C-16	12
2530-741-1907	C-16	11
2530-741-2050	C-16	10
2530-741-2065	C-16	9
2530-741-2068	C-16	7
2530-741-2103	C-12	6
2530-741-2104	C-13	10
2530-741-2106	C-12	3
2530-741-3231	C-25	4
2530-741-5748	C-22	11
2530-770-7070	C-43	9
2530-770-9148	C-31	24
2530-770-9149	C-13	7
2530-770-9150	C-13	6
2530-770-9151	C-13	6
2530-773-9086	C-11	21
2530-773-9387	C-11	21
2530-791-0110	C-13	1
2530-791-3259	C-13	1
2530-792-6283	C-12	1
2530-793-1940	C-12	1
2530-794-9763	C-12	17
2530-797-9295	C-22	10
2530-814-8143	C-11	13
2530-815-7054	C-9	11
2530-815-7082	C-9	9
2530-860-0527	C-32	21
2530-899-6723	C-10	17
2530-929-8927	C-36	11
2530-930-5292	C-18	2
2530-973-2355	C-12	15
2530-973-2356	C-12	15
2530-986-0192	C-25	14
2530-987-2565	C-12	27
2530-991-4342	C-12	27
2540-075-9143	C-31	1
2540-075-9145	C-45	2
2540-075-9146	C-44	4
2540-177-8192	C-10	19

Stock No.	Figure No.	Item No.
2540-679-4519	C-42	4
2540-735-4577	C-30	4
2540-741-1027	C-29	1
2590-022-6727	C-33	20
2590-076-0043	C-39	24
	C-40	28
2590-076-0044	C-39	13
	C-40	17
2590-076-0046	C-40	26
2590-076-0048	C-39	7
	C-40	21
2590-076-0049	C-38	19
2590-076-0050	C-38	32
2590-076-1937	C-31	16
2590-076-1938	C-33	27
2590-076-1939	C-34	14
2590-076-1942	C-33	21
2590-076-1943	C-38	17
2590-076-1944	C-33	3
2590-076-1945	C-37	4
2590-076-1946	C-35	1
2590-076-1947	C-35	1
2590-076-1948	C-33	9
2590-076-1949	C-33	9
2590-125-3795	C-33	45
2590-133-9728	C-32	35
2590-177-8306	C-32	19
2590-229-5711	C-33	28
2590-282-7489	C-48	7
2590-411-2063	C-6	1
2590-421-1587	C-37	5
2590-461-4061	C-33	29
2590-571-6104	C-38	24
2590-611-7883	C-4	11
2590-670-1997	C-32	6
2590-679-3153	C-32	33
2590-679-3154	C-32	23
2590-679-3156	C-32	37
2590-679-3675	C-32	40
2590-679-3676	C-32	29
2590-679-4485	C-34	21
2590-679-4488	C-34	15
2590-679-4507	C-33	14
2590-679-4510	C-34	24
2590-679-4513	C-23	5
2590-679-4521	C-33	39
2590-679-4522	C-34	25
2590-679-4524	C-33	11
2590-679-4530	C-48	1
2590-679-4536	C-33	22
2590-679-4539	C-48	7
2590-679-4814	C-34	17
2590-692-9212	C-46	9
2590-703-4138	C-6	1
2590-703-4145	C-7	1
2590-725-5270	C-32	15
2590-782-3008	C-32	4
2590-782-3254	C-32	36
2590-796-2621	C-33	15
2590-796-2622	C-33	12
2590-808-6139	C-33	32
2590-860-0524	C-39	21
	C-40	22
2590-860-0528	C-39	2
	C-40	2
2590-860-0529	C-38	5
2590-860-0530	C-38	7
2590-860-0531	C-38	1
2590-860-0532	C-33	18
2590-860-0534	C-39	3
	C-40	3
2590-860-0535	C-38	15
2590-860-0536	C-38	26
2590-860-0538	C-7	1
2590-861-7075	C-48	1
2590-861-7076	C-33	42
2590-861-7078	C-33	43
2590-861-7081	C-33	38
2590-861-7082	C-33	36
2590-861-7083	C-33	2
2590-862-2675	C-33	48
2590-871-2881	C-39	23
	C-40	10
2590-879-7159	C-48	4
2590-887-9529	C-33	5
2590-895-7306	C-36	1
2590-895-7307	C-36	5
	C-40	4
2590-899-1507	C-48	4
2590-899-1508	C-48	5
2590-899-4072	C-38	31
2590-899-5216	C-38	20
2590-899-5217	C-38	14
2590-937-5286	C-32	16
2610-269-7383	C-27	1
2610-262-8677	C-27	2
2640-060-3550	C-27	4
2640-555-2843	C-27	3
3040-150-7127	C-12	10
3040-610-3273	C-11	11
3110-100-0293	C-24	9
3110-100-0633	C-32	24
3110-100-3563	C-24	14
3110-100-9812	C-32	25
3110-142-4351	C-38	25
3110-142-4358	C-24	8
3110-143-7538	C-25	9
3110-143-7586	C-25	12
3110-185-6461	C-24	5
3110-198-1277	C-34	7
3110-516-5289	C-34	27
3110-516-5850	C-34	22
3110-606-1840	C-31	23
3110-606-1841	C-31	25
3110-679-4551	C-31	22
3110-679-4554	C-34	2
3110-682-5444	C-24	6
3110-752-0775	C-38	20
3120-433-4633	C-35	2
	C-36	2
3120-661-9119	C-32	38
3120-679-3158	C-41	8
3120-679-4549	C-23	23
3120-679-4555	C-33	47
3120-861-7080	C-35	3
	C-36	3
3120-899-1355	C-39	22
4010-165-6059	C-31	4
4010-435-7709	C-31	32
4010-923-5970	C-29	6
4030-075-7212	C-29	20
4030-076-1924	C-28	5
4030-809-6702	C-29	7
4030-911-7620	C-29	5
4030-930-3154	C-31	3
4710-203-3171	C-19	12

Stock No.	Figure No.	Item No.
4710-231-7432	C-20	8
4720-238-8304	C-22	6
4720-809-2750	C-18	3
4730-036-4421	C-15	3
4730-050-4203	C-38	4
4730-050-4208	C-31	30
	C-32	32
	C-34	6
	C-38	22
4730-069-1186	C-19	7
4730-069-1187	C-19	16
4730-172-0031	C-28	9
4730-172-0034	C-32	22
4730-261-4224	C-14	10
4730-278-6318	C-20	4
4730-287-1707	C-14	9
4730-289-4937	C-18	1
4730-301-7470	C-19	15
4730-419-9425	C-14	6
	C-16	3
4730-421-9087	C-22	17
4730-463-1588	C-15	9
4730-535-1535	C-14	4
4730-580-8457	C-22	16
4730-595-0083	C-22	1
4730-729-6437	C-15	5
	C-16	1
4730-773-2163	C-18	7
4730-781-6531	C-20	5
4730-908-3193	C-18	4
4730-909-8627	C-33	19
4730-990-9800	C-20	6
4730-987-9073	C-22	5
5120-711-8418	C-49	1
5120-795-0946	C-49	1
5305-044-5503	C-39	6
	C-40	6
5305-044-5504	C-40	7
5305-050-1077	C-31	6
	C-39	26
	C-40	30
5305-051-0827	C-33	23
5305-052-6922	C-4	3
5305-054-9288	C-28	11
5305-068-0500	C-20	10
5305-068-0502	C-19	1
5305-069-5572	C-24	1
5305-071-2070	C-23	20
5305-071-2241	C-29	15
5305-071-2242	C-33	10
	C-37	8
5305-071-2506	C-23	33
5305-105-6871	C-32	31
5305-225-3839	C-33	10
5305-225-8494	C-11	5
	C-39	17
	C-40	19
5305-253-5631	C-48	3
5305-267-8974	C-12	18
5305-269-2804	C-11	27
5305-269-2807	C-12	24
	C-28	13
	C-32	11
5305-269-2818	C-35	9
5305-269-3209	C-2	8
	C-45	4
	C-46	5
5305-269-3215	C-33	33

Stock No.	Figure No.	Item No.
5305-269-3216	C-23	29
	C-33	31
	C-39	14
	C-40	16
5305-269-3217	C-10	18
5305-269-4511	C-44	5
5305-655-9404	C-41	15
5305-655-9425	C-41	11
5305-655-9572	C-47	3
	C-48	2
5305-679-3189	C-43	8
5305-679-8118	C-23	21
5305-724-5839	C-33	49
5305-724-5885	C-39	1
	C-40	1
5305-724-5910	C-40	6
5305-724-5911	C-40	8
5305-724-7223	C-39	15
	C-40	18
5305-725-4171	C-43	7
5305-728-6291	C-41	10
5305-761-4227	C-32	17
5305-764-0070	C-1	2
5305-782-9489	C-39	11
	C-40	25
5305-812-4766	C-40	27
5305-855-0956	C-4	6
5305-903-2190	C-24	13
5305-951-5617	C-14	12
	C-19	11
5305-958-5246	C-33	16
5305-958-5477	C-23	26
5305-983-6622	C-34	19
5305-983-7461	C-38	2
5305-983-8084	C-33	18
5305-984-4983	C-38	16
5305-984-5672	C-10	11
5305-984-6193	C-5	1
5305-934-6210	C-9	22
5305-988-1721	C-5	6
	C-10	16
	C-15	8
	C-47	3
5305-988-1723	C-12	23
	C-25	21
5305-988-1725	C-5	13
	C-20	3
5306-050-0348	C-29	3
5306-075-7215	C-29	21
5306-174-4246	C-32	20
5306-177-5525	C-29	12
5306-180-1485	C-36	12
5306-206-1560	C-25	6
5306-206-2865	C-36	9
5306-225-8496	C-16	5
	C-19	4
	C-20	11
	C-39	10
	C-40	13
5306-225-8497	C-32	14
5306-225-8516	C-34	29
5306-225-9084	C-1	7
5306-225-9088	C-21	14
5306-245-9373	C-29	8
5306-335-4768	C-25	5
5306-383-4957	C-25	14
5306-520-3089	C-31	2
5306-655-9403	C-41	16

Stock No.	Figure No.	Item No.
5306-655-9522	C-9	23
5306-679-4573	C-42	1
5306-717-4408	C-9	9
5306-733-9239	C-24	17
5306-741-1760	C-12	2
5306-797-9296	C-22	7
5306-866-0038	C-24	17
5306-994-1019	C-10	5
5307-017-9125	C-15	10
5310-044-3339	C-23	16
5310-044-3921	C-9	14
5310-045-3296	C-9	21
	C-14	13
	C-19	10
5310-045-3299	C-5	3
5310-045-5001	C-39	5
	C-40	5
5310-062-4954	C-23	1
5310-067-6356	C-33	40
5310-080-2289	C-32	3
5310-080-6004	C-25	2
	C-29	23
	C-33	35
	C-35	6
	C-36	8
	C-39	20
	C-40	24
5310-081-4219	C-39	18
5310-087-4652	C-10	12
	C-29	30
5310-167-0721	C-13	9
5310-194-1483	C-41	4
5310-209-0698	C-30	3
5310-209-0786	C-4	2
	C-14	2
5310-209-0965	C-24	2
5310-225-6408	C-38	13
	C-41	6
5310-241-6661	C-32	10
5310-269-4040	C-29	4
5310-270-8832	C-32	1
5310-270-8834	C-32	2
5310-274-4544	C-14	5
	C-15	2
	C-16	2
5310-274-8715	C-25	20
5310-314-0764	C-12	11
5310-314-0765	C-12	12
5310-322-7260	C-12	13
5310-333-7553	C-11	16
5310-359-0458	C-14	7
5310-407-9566	C-1	8
	C-10	10
	C-11	6
	C-16	6
	C-19	5
	C-20	12
	C-21	6
	C-29	13
	C-32	13
	C-39	9
	C-40	12
5310-424-1456	C-43	5
5310-431-7435	C-32	12
5310-514-6674	C-34	9
5310-518-5566	C-24	18
	C-25	15
5310-550-1130	C-47	2

Stock No.	Figure No.	Item No.
5310-550-3503	C-12	5
5310-582-5965	C-5	7
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	C-20	2
	C-22	8
	C-23	32
	C-33	8
	C-37	2
5310-584-5272	C-11	25
	C-38	3
	C-39	25
	C-40	29
5310-588-0386	C-31	27
5310-590-7893	C-32	18
5310-594-8038	C-25	15
	C-24	18
5310-596-7691	C-4	5
5310-627-6128	C-13	3
5310-637-9541	C-2	7
	C-9	6
	C-11	28
	C-21	3
	C-23	12
	C-28	14
	C-33	30
	C-35	7
	C-39	8
	C-40	15
	C-44	2
	C-45	5
	C-46	6
5310-641-9939	C-12	7
5310-679-3606	C-22	13
5310-679-4558	C-34	18
5310-679-4559	C-34	23
5310-679-4574	C-42	2
5310-679-4577	C-23	3
5310-679-4584	C-24	7
5310-693-0738	C-32	8
5310-732-0558	C-9	5
	C-21	2
	C-29	27
	C-33	34
	C-39	12
	C-40	14
	C-44	1
	C-45	6
	C-46	7
5310-732-0559	C-9	16
	C-10	4
	C-11	29
	C-35	8
5310-732-0560	C-11	26
	C-12	26
	C-41	13
5310-733-9422	C-9	12
5310-741-1028	C-30	2
5310-741-1378	C-12	25
	C-25	17
5310-741-1379	C-25	16
5310-741-2088	C-15	4
	C-16	4
5310-741-2120	C-13	11
5310-741-4684	C-30	2
5310-761-6882	C-5	11

Stock No.	Figure No.	Item No.
	C-22	9
	C-33	7
	C-37	1
5310-763-8901	C-41	1
5310-763-8905	C-43	2
5310-763-8921	C-29	19
5310-768-0318	C-31	9
5310-800-0695	C-33	24
5310-809-3079	C-28	3
5310-809-4058	C-5	10
	C-37	3
5310-809-5998	C-23	2
	C-31	7
	C-33	54
5310-809-8533	C-29	18
	C-33	41
5310-820-6653	C-39	16
	C-40	5
5310-834-7606	C-28	2
	C-31	8
5310-834-8732	C-33	53
5310-834-8734	C-23	6
5310-835-2037	C-43	1
5310-842-1190	C-41	2
5310-842-1488	C-23	13
5310-842-1490	C-33	25
5310-851-2682	C-29	28
5310-853-9335	C-13	8
5310-880-7744	C-11	7
	C-29	14
	C-34	10
5310-880-7745	C-15	11
5310-880-7746	C-21	5
5310-891-1709	C-29	11
5310-891-1711	C-15	13
5310-903-3993	C-12	4
5310-923-1925	C-10	7
5310-924-4218	C-12	9
5310-934-9757	C-5	4
5310-935-3569	C-25	13
5310-982-4908	C-25	1
	C-36	7
5310-982-5042	C-28	1
5315-012-0123	C-29	17
5315-013-7228	C-23	18
5315-014-2986	C-38	6
5315-018-7851	C-38	21
5315-050-5520	C-34	28
5315-054-2302	C-31	31
5315-062-5417	C-32	30
5315-067-5093	C-38	8
5315-068-2498	C-38	9
5315-076-3505	C-31	11
5315-079-9489	C-28	6
5315-081-7042	C-23	35
5315-298-1481	C-31	29
5315-536-3865	C-32	9
5315-543-3714	C-32	28
5315-543-3923	C-33	44
5315-616-5505	C-34	12
5315-616-5522	C-34	26
5315-616-5524	C-34	13
5315-679-4565	C-31	13
5315-679-4575	C-23	19
5315-679-4576	C-9	18
5315-690-0544	C-38	30
5315-732-8934	C-28	4
5315-754-0848	C-9	2
5315-815-8840	C-10	2
5315-816-1794	C-23	15
	C-33	26
5315-839-2325	C-9	19
	C-11	10
5315-839-2326	C-9	1
5315-839-5822	C-23	34
5315-842-3044	C-10	1
5315-842-3045	C-30	1
5315-844-3665	C-31	15
5315-844-5833	C-31	18
5315-852-4114	C-32	39
5320-011-9951	C-12	22
5320-817-9535	C-11	12
5325-276-5954	C-4	12
5325-276-6082	C-4	10
5325-276-6089	C-4	13
5325-720-6300	C-4	9
5330-075-9150	C-46	3
5330-090-2128	C-22	2
5330-154-8353	C-24	15
5330-285-5123	C-22	15
5330-297-7106	C-2	3
5330-462-0907	C-3	3
5330-584-0265	C-21	9
5330-614-4356	C-25	18
5330-679-4583	C-37	6
5330-741-1429	C-25	8
5340-040-2364	C-4	15
5340-040-2365	C-5	8
5340-053-8008	C-9	15
5340-054-1404	C-34	4
5340-054-1416	C-23	14
	C-4	14
5340-057-3111	C-9	3
5340-075-9147	C-41	3
5340-177-3711	C-20	9
5340-178-1441	C-21	10
5340-200-6145	C-23	7
5340-264-7716	C-4	7
5340-275-6042	C-5	2
5340-282-7515	C-4	8
	C-9	20
5340-282-7519	C-15	6
5340-282-7793	C-19	9
5340-331-2340	C-32	34
5340-350-0155	C-43	4
5340-610-3338	C-11	8
5340-655-7761	C-4	4
	C-19	3
5340-657-9793	C-5	9
5340-679-3185	C-4	1
	C-5	12
5340-679-4570	C-23	22
5340-679-4571	C-23	17
5340-679-4578	C-23	4
5340-679-4580	C-42	3
5340-679-4581	C-37	9
5340-679-4582	C-37	7
5340-687-5221	C-33	55
5340-693-0739	C-10	6
5340-737-3354	C-18	8
5340-809-1494	C-5	14
	C-20	1
5340-896-1094	C-14	1
5340-947-0141	C-29	10
5340-985-0923	C-10	3
5360-321-6464	C-11	15

Stock No.	Figure No.	Item No.
5360-535-1924	C-5	5
5360-699-9018	C-12	16
5365-168-2762	C-33	6
5365-247-4082	C-9	4
5365-260-4882	C-24	16
5365-582-7363	C-11	17
5365-721-6876	C-33	46
5935-810-9229	C-7	2
5940-050-6209	C-7	6
5975-335-2586	C-19	8
5975-335-2588	C-14	15
6145-772-0853	C-6	3
6220-179-4324	C-3	2
6220-368-4945	C-2	6
6220-678-9047	C-1	4
6220-699-5623	C-2	1
6220-752-6020	C-2	2
6220-775-2384	C-1	3
6220-846-9745	C-1	1
6220-880-1625	C-3	1
6240-019-0877	C-1	5
	C-2	5
	C-3	7
6240-019-3093	C-3	5
6240-044-6914	C-2	4
	C-3	4
9905-202-3639	C-47	1
9905-205-2795	C-47	1
9905-752-4649	C-6	2
	C-7	7
9905-841-4445	C-6	4
	C-7	4
9905-893-3570	C-6	4

Reference Number Cross-Reference to Figure and Item Number

Reference No.	*Mfg. code*	*Figure No.*	*Item No.*
MS15001-1	96906	C-38	4
MS15003-1	96906	C-31	30
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		C-38	22
MS15003-5	96906	C-28	9
MS15003-6	96906	C-32	22
MS15570-1251	96906	C-1	5
		C-2	5
		C-3	7
MS15570-623	96906	C-3	5
MS15795-714	96906	C-36	10
MS16562-68	96906	C-31	15
MS16562-81	96906	C-31	18
MS16624-1125	96906	C-33	46
MS16625-1387	96906	C-24	16
MS16997-142	96906	C-38	2
MS16997-60	96906	C-33	18
MS16997-81	96906	C-34	19
MS19068-091	96906	C-24	5
MS19070-082	96906	C-24	6
MS20392-7C37	96906	C-23	35
MS20392-9C127	96906	C-28	6
MS21045-6	96906	C-25	1
		C-36	7
MS21045-8	96906	C-23	1
MS21318-57	96906	C-48	3
MS21333-105	96906	C-5	14
		C-20	1
MS21333-16	96906	C-20	9
MS21333-34	96906	C-15	6
MS24629-58	96906	C-4	3
MS24630-46	96906	C-14	12
		C-19	11
MS24649-47	96906	C-4	6
MS24649-57	96906	C-14	3
MS24665-132	96906	C-9	19
		C-11	10
MS24665-281	96906	C-9	1
MS24665-283	96906	C-10	1
MS24665-285	96906	C-23	15
		C-33	26
MS24665-353	96906	C-23	34
MS24665-355	96906	C-29	17
MS24665-357	96906	C-31	29
MS24665-423	96906	C-23	18
MS24665-499	96906	C-30	1
MS27120-6	96906	C-29	10
MS27183-10	96906	C-5	10
		C-37	3
MS27183-12	96906	C-39	18
		C-40	20
MS27183-14	96906	C-25	2
		C-29	23
		C-33	35
		C-35	6
		C-36	8
		C-39	20
		C-40	24
MS27183-18	96906	C-23	2
		C-31	7
		C-33	54
MS27183-19	96906	C-28	3
MS27183-23	96906	C-29	18
		C-33	41
MS27183-29	96906	C-30	3
MS27950-5	96906	C-29	8
MS27954-3	96906	C-29	9
MS28775-12	96906	C-21	9
MS35045-3	96906	C-26	2
MS35140-12	96906	C-4	4
		C-19	3
MS35140-5	96906	C-14	14
MS35140-6	96906	C-19	9
MS35190-254	96906	C-23	26
MS35190-289	96906	C-33	16
MS35206-226	96906	C-38	16
MS35206-245	96906	C-5	1
MS35206-263	96906	C-9	22
MS35206-277	96906	C-5	6
		C-10	16
		C-15	8
		C-47	3
MS35206-279	96906	C-12	23
		C-25	21
MS35206-281	96906	C-5	13
		C-20	3
MS35206-292	96906	C-10	11
MS35308-109	96906	C-24	13
MS35333-40	96906	C-47	2
MS35333-41	96906	C-13	9
MS35333-44	96906	C-41	4
MS35335-32	96906	C-4	5
MS35335-33	96906	C-4	2
		C-14	2
MS35335-34	96906	C-34	9
MS35335-35	96906	C-13	3
MS35335-36	96906	C-12	5
MS35335-39	96906	C-33	24
MS35338-42	96906	C-5	3
MS35338-43	96906	C-9	21
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		C-19	10
MS35338-44	96906	C-5	7
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		C-12	8
		C-15	7
		C-19	2
		C-20	2
		C-22	8
		C-23	32
		C-33	8
		C-37	2
MS35338-45	96906	C-1	8
		C-10	10
		C-11	6
		C-16	6
		C-19	5
		C-20	12
		C-21	6
		C-29	13
		C-32	13
		C-39	9
		C-40	12
MS35338-46	96906	C-2	7
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		C-11	28
		C-21	8
		C-23	12
		C-28	14

Reference No.	Mfg. code	Figure No.	Item No.
		C-33	30
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MS35338-47	96906	C-24	2
MS35338-48	96906	C-11	25
		C-38	3
		C-39	25
		C-40	29
MS35338-50	96906	C-39	16
		C-40	5
MS35338-63	96906	C-25	20
MS35340-31	96906	C-39	5
MS35340-48	96906	C-28	2
		C-31	8
MS35387-1	96906	C-47	1
MS35387-2	96906	C-47	1
MS35388-16	96906	C-27	2
MS35392-13	96906	C-27	1
MS35426-11	96906	C-28	1
MS35478-1683	96906	C-2	4
		C-3	4
MS35489-16	96906	C-4	13
MS35489-43S	96906	C-4	10
MS35489-49	96906	C-4	12
MS35490-35	96906	C-19	13
MS35490-39	96906	C-4	9
MS35648-16	96906	C-23	14
MS35649-282	96906	C-5	4
MS35671-56	96906	C-38	8
MS35674-29	96906	C-32	39
MS35674-41	96906	C-32	30
MS35677-51	96906	C-38	9
MS35690-731	96906	C-12	4
MS35691-13	96906	C-13	8
MS35691-17	96906	C-29	28
MS35691-25	96906	C-15	13
MS35691-33	96906	C-33	53
MS35691-37	96906	C-23	6
MS35691-53	96906	C-43	1
MS35691-61	96906	C-41	2
MS35691-9	96906	C-29	11
MS35692-21	96906	C-23	13
MS35692-37	96906	C-33	25
MS35746-1	96906	C-22	1
MS35748-1	96906	C-22	2
MS35756-10	96906	C-34	13
MS35756-101	96906	C-34	12
MS35756-12	96906	C-34	26
MS35810-33	96906	C-9	2
MS35810-34	96906	C-10	2
MS35812-4	96906	C-10	3
MS35842-2	96906	C-18	4
MS35842-13	96906	C-33	19
MS39020-1	96906	C-6	2
		C-7	7
MS39020-2	96906	C-6	4
		C-7	4
MS39020-3	96906	C-6	4
MS39086-93	96906	C-38	30
MS39133-2	96906	C-22	5
MS39179-5	96906	C-19	7
MS39202-6	96906	C-20	6
MS39206-7	96906	C-20	5
MS45905-S6	96906	C-10	7
MS49005-2	96906	C-22	17
MS51302-1	96906	C-1	1
MS51329-1	96906	C-2	1
MS51371-1	96906	C-27	3
MS51375-1	96906	C-27	4
MS51922-17	96906	C-10	12
		C-29	30
MS51922-53	96906	C-38	13
		C-41	6
MS51922-57	96906	C-33	40
MS51933-49	96906	C-29	4
MS51943-42	96906	C-32	10
MS51943-46	96906	C-25	13
MS51955-74	96906	C-28	11
MS51959-46	96906	C-1	2
MS51963-104	95906	C-39	1
		C-40	1
MS51963-99	96906	C-33	49
MS51965-28	96906	C-33	1
MS51967-14	96906	C-31	9
MS51967-2	96906	C-5	11
		C-22	9
		C-33	7
		C-37	1
MS51967-23	96906	C-29	19
MS51967-5	96906	C-11	7
		C-29	14
		C-34	10
MS51967-8	96906	C-9	5
		C-21	2
		C-29	27
		C-33	34
		C-39	12
		C-40	14
		C-44	1
		C-45	6
		C-46	7
MS51968-11	96906	C-15	11
MS51968-14	96906	C-11	26
		C-12	26
		C-41	13
MS51968-20	96906	C-43	2
MS51968-23	96906	C-41	1
MS51968-5	96906	C-21	5
MS51968-8	96906	C-9	16
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		C-11	29
		C-35	8
MS51973-74	96906	C-41	10
MS51983-1	96906	C-24	18
		C-25	15
		C-24	18
MS51983-2	96906	C-25	15
MS53044-5	96906	C-26	1
MS87006-51	96906	C-31	3
MS9048-271	96906	C-31	31
MS90725-10	96906	C-29	15
MS90725-118	96906	C-31	6
		C-39	26
		C-40	30
MS90725-158	96906	C-40	7
MS90725-160	96906	C-39	6
		C-40	6
MS90725-162	96906	C-40	6
MS90725-163	96906	C-40	8
MS90725-164	96906	C-33	23
MS90725-29	96906	C-11	5
		C-39	17

Reference No.	Mfg. code	Figure No.	Item No.
		C-40	19
MS90725-3	96906	C-20	10
MS90725-31	96906	C-16	5
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		C-39	10
		C-40	13
MS90725-32	96906	C-32	14
MS90725-52	96906	C-34	29
MS90725-58	96906	C-2	8
		C-45	4
		C-46	5
MS90725-6	96906	C-19	1
MS90725-63	96906	C-44	5
MS90725-65	96906	C-33	33
MS90725-66	96906	C-23	29
		C-33	31
		C-39	14
		C-40	16
MS90725-67	96906	C-10	18
MS90725-8	96906	C-33	10
MS90725-84	96906	C-24	1
MS90725-9	96906	C-33	10
		C-37	8
MS90726-111	96906	C-32	17
MS90726-178	96906	C-43	7
MS90726-29	96906	C-1	7
MS90726-33	96906	C-21	14
MS90726-61	96906	C-11	27
MS90726-64	96906	C-12	24
		C-28	13
		C-32	11
MS90726-74	96906	C-35	9
MS90726-8	96906	C-12	18
MS90727-57	96906	C-13	2
MS90728-114	96906	C-23	20
MS90728-165	96906	C-39	15
		C-40	18
MS90728-3	96906	C-23	33
MS90728-66	96906	C-39	11
		C-40	25
MT775	81348	C-19	12
9001	19207	C-45	3
9050	19207	C-46	8
9065	19207	C-35	2
		C-36	2
9068	19207	C-36	1
9085	19207	C-33	22
9086	19207	C-33	21
9091	19207	C-33	6
9093	19207	C-37	6
9099	19207	C-45	1
9102	19207	C-48	1
9103	19207	C-48	7
9106	19207	C-23	28
9107	19207	C-23	28
9113	19207	C-23	30
9114	19207	C-23	24
9115	19207	C-23	23
9117	19207	C-23	17
9118	19207	C-23	22
9119	19207	C-23	3
9120	19207	C-23	4
9121	19207	C-23	21
9122	19207	C-23	19
9123	19207	C-42	2
9124	19207	C-42	1
9125	19207	C-23	27

Reference No.	Mfg. code	Figure No.	Item No.
10860127	19207	C-23	25
10860128	19207	C-23	10
10860129	19207	C-23	11
10860130	19207	C-23	31
10860131	19207	C-23	5
10860134	19207	C-23	9
10860135	19207	C-23	9
10860136	19207	C-23	8
10860145	19207	C-37	9
10860146	19207	C-37	7
10860936	19207	C-33	57
10860937	19207	C-33	48
10860938	19207	C-33	15
10885442	19207	C-39	2
		C-40	2
10885443	19207	C-38	18
10885445	19207	C-39	22
		C-40	4
10885446	19207	C-38	15
10885448	19207	C-38	17
10885450	19207	C-38	5
10885452	19207	C-39	3
		C-40	3
10885453	19207	C-39	13
		C-40	17
10885454	19207	C-38	10
10885459	19207	C-38	7
10885462	19207	C-40	26
10885466	19207	C-39	7
		C-40	21
10885467	19207	C-40	11
10885476	19207	C-38	19
10885478	19207	C-38	26
10890069	19207	C-36	5
10891200	19207	C-29	32
10891201	19207	C-29	32
10891219	19207	C-44	3
10891229	19207	C-29	29
10891245	19207	C-29	16
10891259	19207	C-29	31
10891260	19207	C-44	4
10891262	19207	C-6	1
10891263	19207	C-7	1
10891266	19207	C-48	5
10891267	19207	C-48	4
10891268	19207	C-48	4
10891278	19207	C-40	9
10891283	19207	C-29	20
10891284	19207	C-29	21
10891298	19207	C-39	4
		C-40	27
10891299	19207	C-38	32
10899780	19207	C-35	3
		C-36	3
10906396	19207	C-36	4
10906397	19207	C-36	6
10906399	19207	C-33	3
10906406	19207	C-33	47
10906407	19207	C-33	43
10906415	19207	C-37	5
10906418	19207	C-37	4
10914241	19207	C-35	4
10914242	19207	C-35	4
10914243	19207	C-35	1
10914244	19207	C-35	1
10914245	19207	C-33	45
10914247	19207	C-33	9
10914359	19207	C-33	28

Reference No.	Mfg. code	Figure No.	Item No.
10914368	19207	C-29	12
10914369	19207	C-29	7
10914500	19207	C-41	3
10933266	19207	C-45	2
10933281	19207	C-33	45
10933282	19207	C-33	9
10933343	19207	C-20	7
10933345	19207	C-20	8
10939625	19207	C-14	8
11614157	19207	C-3	1
11639519-2	19207	C-3	3
11639520	19207	C-3	6
11639535	19207	C-3	2
127670	21450	C-29	24
142986	21450	C-38	6
144245	21450	C-23	7
147925	24617	C-35	5
17C18035050	80244	C-14	15
17C18035090	80244	C-19	8
171732	21450	C-48	6
171764	21450	C-47	3
		C-48	2
179125	21450	C-15	10
187745	19207	C-32	31
187851	21450	C-38	21
190153	21450	C-14	9
218586	21450	C-12	9
33H787125	80244	C-22	6
42C14495	80244	C-29	2
42C14854-215	80244	C-31	4
425324	21450	C-9	3
435801	21450	C-14	10
443045	21450	C-32	28
443339	21450	C-23	16
443921	21450	C-9	14
444000	24617	C-19	15
444166	21450	C-19	14
454634	19207	C-32	18
500174	21450	C-24	15
500333	21450	C-22	3
500348	21450	C-29	3
504256	21450	C-19	16
505520	21450	C-34	28
506209	21450	C-7	6
5156636	19207	C-18	2
5167679	19207	C-15	9
5203089	19207	C-31	2
5214930	19207	C-14	7
5298653	19207	C-14	5
		C-15	2
		C-16	2
5303461	19207	C-10	9
5323088	19207	C-12	7
538008	21450	C-9	15
541401	21450	C-34	4
544160	21450	C-33	44
545033	21450	C-5	2
5703039	19207	C-39	23
		C-40	10
573036	21450	C-14	1
573111	21450	C-4	14
		C-9	23
588463	21450	C-46	10
595479	21450	C-41	11
6144356	19207	C-25	18
6144454	19207	C-25	19
6204ZJ	52676	C-34	22
68249E	09386	C-25	14
700076	21450	C-34	27
7001762	19207	C-5	5
700243	21450	C-34	11
7032127	19207	C-32	4
7032128	19207	C-32	19
7032131	19207	C-32	23
7032132	19207	C-32	29
7032133	19207	C-32	33
7032134	19207	C-32	12
7032135	19207	C-32	15
7032136	19207	C-32	16
7032137	19207	C-32	35
7032143	19207	C-32	36
7032155	19207	C-32	37
7032156	19207	C-32	40
7032176	19207	C-31	32
7032188	19207	C-32	21
7034651	19207	C-31	25
7049884	19207	C-10	8
705034	21450	C-24	8
705472	21450	C-24	14
705527	21450	C-38	25
7056709	19207	C-7	6
705824	21450	C-32	25
7059814	19207	C-49	1
7064602	19207	C-46	9
7064978	19207	C-12	19
7064979	19207	C-12	20
706640	21450	C-24	9
706915	21450	C-38	33
707070	21450	C-32	24
7092048	19207	C-42	4
712868	21450	C-25	9
712869	21450	C-25	12
7222571	19204	C-24	11
7320658	19207	C-2	3
7328401	19207	C-38	34
7328402	19207	C-38	31
7328405	19207	C-38	23
7328934	19207	C-28	4
7335058	19207	C-11	21
7335059	19207	C-11	21
7339238	19207	C-24	17
7339239	19207	C-24	17
7339422	19207	C-9	13
7339460	19207	C-29	5
7341458	19207	C-33	55
7341459	19207	C-33	52
7341460	19207	C-33	51
7341461	19207	C-33	50
7341462	19207	C-42	3
7341463	19207	C-33	14
7349028	19207	C-43	3
7349029	19207	C-43	5
7350985	19207	C-31	27
7354577	19207	C-30	4
7358183	19207	C-7	3
7358187	19207	C-7	2
7373260	19207	C-16	8
7373354	19207	C-18	8
7389620	19207	C-26	3
7392815	19207	C-9	8
		C-10	13
7409322	19207	C-17	2
7411022	19207	C-22	10
7411027	19207	C-29	1
7411028	19207	C-30	2
7411030	19207	C-32	38

Reference No.	Mfg. code	Figure No.	Item No.
11081	19207	C-22	12
11378	19207	C-12	25
		C-25	17
11379	19207	C-25	16
11425	19207	C-25	3
11429	19207	C-25	8
11433	19207	C-25	7
11760	19207	C-12	2
11903	19207	C-16	12
12050	19207	C-16	10
12065	19207	C-16	9
12068	19207	C-16	7
12079	19207	C-15	5
		C-16	1
12088	19207	C-15	4
		C-16	4
12103	19207	C-12	6
12104	19207	C-13	10
12106	19207	C-12	3
12120	19207	C-13	11
13231	19207	C-25	4
14684	19207	C-30	2
15340	19207	C-36	12
15748	19207	C-22	11
20774	19207	C-38	24
20775	19207	C-38	20
20777	19207	C-38	29
20829	19207	C-38	27
25997	19207	C-2	6
26020	19207	C-2	2
91628	19207	C-36	9
2769	19207	C-11	12
2773	19207	C-11	2
2774	19207	C-11	9
96416	19207	C-38	28
33692	19207	C-4	7
97070	19207	C-43	9
33749	19207	C-4	8
		C-9	20
5464	19207	C-14	6
		C-16	3
0946	19207	C-49	1
6195	19207	C-32	3
3176	19207	C-24	10
3177	19207	C-24	12
4916	19207	C-43	4
9296	19207	C-22	7
9373	19207	C-48	7
9598	19207	C-29	6
9599	19207	C-21	11
9602	19207	C-21	13
9605	19207	C-21	7
9608	19207	C-21	3
9610	19207	C-21	10
9611	19207	C-21	12
9612	19207	C-22	14
9613	19207	C-22	16
9614	19207	C-22	13
9691	19207	C-18	7
9699	19207	C-18	9
9851	19207	C-19	6
		C-20	13
9971	19207	C-32	9
9972	19207	C-32	20
9974	19207	C-32	6
4623	19207	C-39	19
		C-40	23
5089	19207	C-38	11

Reference No.	Mfg. code	Figure No.	Item No.
8016879	19207	C-11	17
8016971	19207	C-11	1
8016972	19207	C-11	1
8016973	19207	C-11	11
8016974	19207	C-11	13
8016975	19207	C-11	14
8016976	19207	C-11	18
8016977	19207	C-11	24
8016978	19207	C-11	16
8016980	19207	C-11	23
8016981	19207	C-11	23
8016982	19207	C-11	8
8016983	19207	C-11	4
8016998	19207	C-11	3
8017002	19207	C-17	1
8017003	19207	C-17	1
8017159	19207	C-11	20
8017162	19207	C-11	19
8017164	19207	C-11	22
8017236	18876	C-14	4
8020015	19207	C-38	12
8020123	19207	C-32	27
8020174	19207	C-32	26
8020716	19207	C-32	34
812364	18876	C-6	3
8328782	19207	C-20	4
8329823	19207	C-22	15
8330805	19207	C-22	4
8330813	19207	C-32	2
8330821	19207	C-32	1
8331539	19207	C-32	5
8331541	19207	C-32	7
8331542	19207	C-32	8
8331946	19207	C-10	6
8332586	19207	C-15	3
8333771	19207	C-25	10
8333780	19207	C-25	6
8333783	19207	C-25	14
8336704	19207	C-13	7
8336705	19207	C-13	6
8336789	19207	C-13	6
8347212	19207	C-4	15
8347213	19207	C-5	8
8347216	19207	C-7	5
8357980	19207	C-18	6
8557981	19207	C-21	4
8363955	19207	C-41	12
8363957	19207	C-8	1
8363961	19207	C-41	5
8363966	19207	C-41	14
8363968	19207	C-41	15
8363969	19207	C-43	6
8363970	19207	C-43	8
8363971	19207	C-41	7
8363972	19207	C-41	8
8363973	19207	C-41	9
8363974	19207	C-41	16
8363978	19207	C-4	1
		C-5	12
8363981	19207	C-15	14
8363982	19207	C-15	1
8363983	19207	C-15	12
8363986	19207	C-10	5
8363987	19207	C-10	14
8363988	19207	C-10	19
8364004	19207	C-29	22
8364009	19207	C-29	25
8364010	19207	C-29	26

Reference No.	Mfg. code	Figure No.	Item No.
8364023	19207	C-31	10
8364024	19207	C-31	12
8364025	19207	C-31	19
8364026	19207	C-31	11
8364027	19207	C-31	14
8364029	19207	C-31	28
8364031	19207	C-31	17
8364032	19207	C-31	16
8364033	19207	C-31	13
8364034	19207	C-31	21
8364038	19207	C-31	23
8365390	19207	C-18	1
8365425	19207	C-18	3
8365426	19207	C-18	5
8365427	19207	C-21	1
8374028	19207	C-31	20
8374036	19207	C-31	24
8374037	19207	C-31	22
8387680	19207	C-38	1
8395502	19207	C-24	7
8675892	19207	C-24	3
8675893	19207	C-24	4
8675894	19207	C-9	12
8675895	19207	C-9	17
8675963	19207	C-34	7
8675964	19207	C-34	2
8683881	19207	C-39	24
		C-40	28
8683884	19207	C-38	14
8683896	19207	C-38	20
8683898	19207	C-39	21
		C-40	22
8686728	19207	C-28	16
8694464	19207	C-1	4
8699500	19207	C-10	17
8710699	19207	C-12	22
8713986	19207	C-11	15
8719915	19207	C-25	11
8720025	19207	C-25	5
8720331	19207	C-13	13
8720515	19207	C-12	16
8720517	19207	C-12	21
8723800	19207	C-12	1
8723801	19207	C-12	1
8724501	19207	C-5	9
8733890	19207	C-12	27
8733891	19207	C-12	27
8733892	19207	C-12	17
8733893	19207	C-12	17
8733896	19207	C-13	4
8733897	19207	C-13	4
8733901	19207	C-13	1
8733902	19207	C-13	1
8733908	19207	C-13	5
8733909	19207	C-13	5
8733911	19207	C-12	15
8733912	19207	C-12	15
8733916	19207	C-16	11
8733918	19207	C-16	13
8733920	19207	C-16	11
8733922	19207	C-16	13
8733926	19207	C-12	10
8733927	19207	C-12	10
8733932	19207	C-13	12
8733933	19207	C-13	12
8733935	19207	C-12	11
8733936	19207	C-12	12
8733937	19207	C-12	13
8733938	19207	C-12	14
8739786	19207	C-34	18
8739787	19207	C-34	16
8739788	19207	C-34	23
8739792	19207	C-34	17
8739793	19207	C-34	24
8739794	19207	C-34	15
8739795	19207	C-34	3
8739797	19207	C-34	8
8739798	19207	C-34	1
8739799	19207	C-34	5
8739876	19207	C-33	5
8739881	19207	C-33	11
8739882	19207	C-33	56
8739883	19207	C-33	13
8739900	19207	C-28	7
8740063	19207	C-9	18
8740064	19207	C-14	11
8740108	19207	C-28	10
8740109	19207	C-28	10
8740110	19207	C-28	12
8740111	19207	C-28	12
8740112	19207	C-28	8
8740113	19207	C-28	15
8740114	19207	C-28	15
8740166	19207	C-34	20
8740167	19207	C-34	21
8740168	19207	C-34	14
8740170	19207	C-34	25
8740175	19207	C-33	39
8740187	19207	C-31	26
8740191	19207	C-31	5
8740192	19207	C-31	1
8741646	19207	C-1	3
8741650	19207	C-1	6
8747908	19207	C-4	11
8759629	19207	C-46	1
8759630	19207	C-46	2
8759745	19207	C-7	1
8759746	19207	C-33	12
8759747	19207	C-33	17
8759750	19207	C-6	1
8759766	19207	C-33	20
8759769	19207	C-36	11
8759823	19207	C-33	38
8759859	19207	C-33	37
8759860	19207	C-33	36
8759862	19207	C-33	27
8759865	19207	C-33	2
8759867	19207	C-33	42
8759890	19207	C-9	11
8759891	19207	C-9	7
8759892	19207	C-9	7
8759893	19207	C-9	4
8759894	19207	C-9	10
8759895	19207	C-9	9
8759903	19207	C-33	32
8759904	19207	C-33	29
8759905	19207	C-33	29
8759938	19207	C-48	1
8759940	19207	C-28	7
9070061	19207	C-28	5
9759653	19207	C-46	3
9759654	19207	C-46	4

	Paragraph	Page
ntrols:		
General	2–4	2–1
Hand brakes	2–6	2–1
Landing jacks	2–9	2–4
Lights	2–5	2–1
Retractable support assy (M390, M390C)	2–8	2–4
Service brakes	2–7	2–1
Steps (M390, M390C)	2–10	2–4
Swivel caster with hub assembly (M514, XM545)	2–8	2–4
ta, tabulated	1–11	1–1
scription	1–8	1–1
ference between models	1–9	1–1
ctrical system, maintenance:		
Intervehicular cable (M514, XM545)	3–12	3–7
Intervehicular cable (M390, M390C)	3–13	3–7
Light assemblies	3–11	3–7
Wiring harness	3–14	3–7
ame and associated parts maintenance, M514, XM545:		
Leveling jacks	3–39	3–22
Swivel caster with hub assembly	3–38	3–21
M390 and M390C:		
Leveling jacks	3–41	3–25
Retractable support assy	3–40	3–25
rms and records	1–2	1–1
nd brake system, maintenance:		
Hand brake cable adjustment	3–16	3–9
Hand brake lever adjustment	3–15	3–9
rication	3–1—3–5	3–1
Name, caution and instruction plates	1–10	1–1
eration:		
Before operation services	2–11	2–4
Coupling trailer to towing vehicle	2–12	2–4
Leveling the trailer	2–14	2–5
Uncoupling the trailer from towing vehicle	2–13	2–5
ating	3–6	3–1
ventive maintenance (daily):		
General procedures for driver or operator	2–15	2–6
Specific procedures for driver or operator	2–16	2–6
ventive maintenance (semi-nnual)	3–8, 3–9	3–4
Repair and rebuild standards:		
M514 and XM545	3–44	3–27
M390 and M390C	3–45	3–28
Scope	1–1	1–1
Service brake system, maintenance:		
Air chamber with master cylinder	3–25	3–14
Assemble brake assembly:		
M514, XM545	3–21	3–13
M390, M390C	3–23	3–13
Brake shoe adjustment:		
M514, XM545	3–18	3–11
M390, M390C	3–19	3–11
Disassemble brake assembly:		
M514, XM545	3–20	3–12
M390, M390C	3–22	3–13
Filter, air	3–24	3–14
Tests	3–17	3–11
Wheel cylinder:		
M514, XM545	3–26	3–14
M390, M390C	3–27	3–14
Service upon receipt of materiel	2–1—2–3	2–1
Shipment and limited storage and demolition to prevent enemy use:		
Domestic shipping instructions	4–1	4–1
Limited-storage instructions	4–2	4–1
Loading and Blocking instructions:		
M514 and XM545	4–3	4–2
M390 and M390C	4–4	4–2
Demolition:		
General	4–5	4–4
Trailer destruction	4–6	4–5
Stenciling and marking the vehicle		
Suspension system maintenance (M514 and XM545):		
Bumper rod	3–31	3–16
Hub and drum assy	3–32	3–16
Shock absorbers	3–30	3–16
Suspension arm assy	3–33	3–18
Torsion spring adjustment	3–28	3–14
Wheels and tires	3–29	3–16
Suspension system maintenance M390 and M390C:		
Axle assembly	3–36	3–19
Hub and drum assembly	3–35	3–18
Springs and radius rods	3–37	3–21
Wheels and tires	3–34	3–18
Troubleshooting	3–10	3–5

By Order of the Secretary of the Army:

CREIGHTON W. ABRAMS
General, United States Army
Chief of Staff

Official:

VERNE L. BOWERS
Major General, United States Army
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